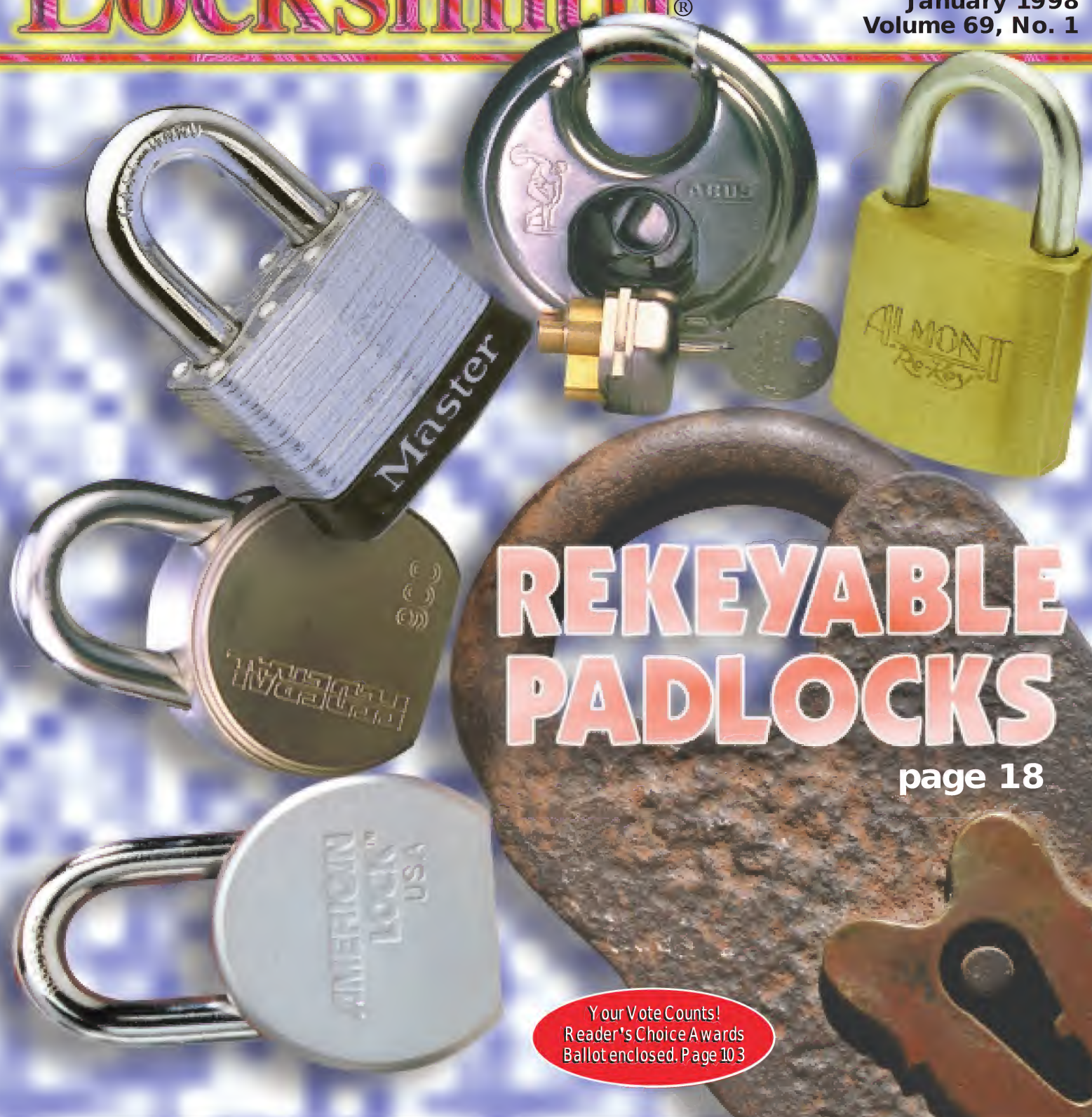


The National Locksmith®

\$5.00

CODES
'98 CHRYSLER M
Model 1-2678
page 110

January 1998
Volume 69, No. 1

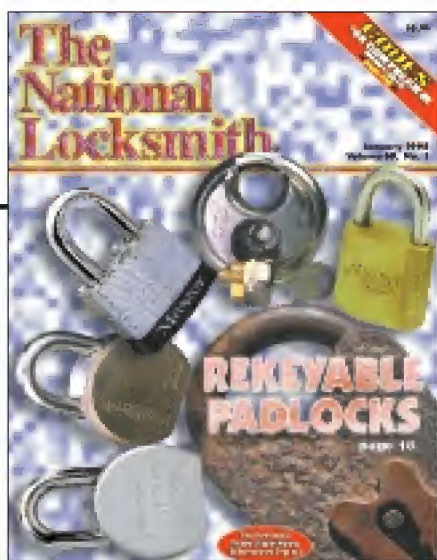


REKEYABLE PADLOCKS

page 18

Your Vote Counts!
Reader's Choice Awards
Ballot enclosed. Page 103

On The Cover...



Unlike yesterday's generation, today's padlocks come in serviceable varieties. Shown from left to right are: American Lock Co., Federal Lock Co., Master Lock Co., Abus Lock Co. and Almont Lock Co.

Publisher Marc Goldberg

Editor Greg Mango

Art Director Jim Darow

Production Director Edgar Shindelar

Production Assistants Kim Fryer
Dave Krofel

Technical Editor Jake Jakubowski

Senior Writers

Dale Libby, Dave McOmie, Sara Probasco

Contributing Writers

Tony Blass, Joe & Dee Bucha, Carl Cloud,
Ron & Chris Curry, Sal Dulcamaro, CML,
Steve Gebbia, CML, Michael Hyde,
Giles Kalvelage, Jim Langston, Tom Lynch,
Tom Mazzone, Don Probasco, Don Shiles,
Robert Sieveking

Special Correspondent Bill Reed

Director of Sales & Marketing

Jeffrey Adair

Advertising Account Manager

Debbie Schertzing

Circulation Manager Tom Dean

Accounting Manager Sheila Campo

Administrative Assistant Kelly Quinn

Shipping Manager Dan Garrity

National Publishing Co.

The National Locksmith® ISSN #0364-3719 is published monthly by the National Publishing Co., 1533 Burgundy Parkway, Streamwood, Illinois 60107. Periodicals postage paid at Bartlett, Illinois 60107 and additional mailing offices USPS 040110. Subscriptions \$41.00 per year in the USA; \$54.00 per year in Canada; \$67.00 in all other countries. Single copies \$5.00 each. Postmaster, please send change of address to National Publishing Co., 1533 Burgundy Parkway, Streamwood, Illinois 60107. ©1998 by the National Publishing Company. All rights reserved. Printed in the U.S.A.



The
Audit
Bureau
Member



Questions or problems with your
subscription?

Call (773) 348-6358

For all other inquiries,
call (630) 837-2044, fax: (630) 837-1210,
or E-Mail: natlock@aol.com
See us on the World-Wide Web:
www.TheNationalLocksmith.com

CONTENTS

The National Locksmith January 1998 □ Vol. 69, No. 1

FEATURES

COVER FEATURE! 18

Rekeyable Padlocks

Rekeying procedures for American, Federal, Master, Abus and Almont in a photo story format.

30

1996 Pontiac Sunfire

Servicing the newly redesigned sporty Pontiac Sunfire.

39

The Bookmark

A review of the manual "Steve Young's Quick Entry Car Opening".

42

Access Control with Securitron, Part 1

Securing a door remotely when faced with a possible threat.

46

Locksmiths & Distributors

Building relationships between distributors and locksmiths through communication.

53

Diebold, Diebold, Double Trouble

The dial has been melted off the spindle by the previous safe technician and then pounded back on. I knew there were more surprises to come.

62

The Simplex 7002

Auxiliary mechanical deadlock protection for residential and commercial applications.

82

Distributor Close-Up...

U.S. Lock.

89

No Holds Barred

These slam shut locks are widely used on wicket and food pass doors.

CODES 110

1998 Chrysler

M0001-2618.

123

Odds and Ends

Interesting bits of accumulated information.

DEPARTMENTS

5 COMMENTARY

6 MANGO'S MESSAGE

10 LETTERS

14 SECURITY CAFÉ

28 BUSINESS BRIEFS

66 BEGINNER'S CORNER

72 TECHTIPS

79 EXPLODED VIEW

84 LIGHTER SIDE

88 THRU THE KEYHOLE

92 REED REPORT

108 LOCKSMITH CALENDAR

136 TEST DRIVE

Click on the article
you wish to read

COMMENTARY



<http://www.TheNationalLocksmith.com>
User name: national User ID: G5fh84

Big brother is watching... and he lost your keys!

I'm sure you're familiar with Cadillac's OnStar system which among other things, can unlock a vehicle owner's car when he's locked out. If the customer locks himself out of the car, he simply calls OnStar on a special 800 number, and gives his personal identification number (PIN). Using satellite technology, OnStar remotely unlocks the car.

Wow, this will put a crimp in the car opening business, won't it? Or will it?

A friend of mine locked himself out of his Seville recently. With a confident smirk, he realized that he didn't need a locksmith at all. Patting himself down for his wallet, however, his smirk slowly changed to a look of chagrin.

He had locked the paper with his PIN and the 800 number safely in his car.

"What did you do next," I asked my friend.

"Um, well, I called a locksmith," he said.

Well Dave McOmie has been on a roll lately. Two brand new safe opening books have just hit the shelf.

The first is called *Gun Safes*, and it is a manual that has been needed in this industry for a long time. The book shows you the various gun safes you'll encounter over and over again, and it shows you the quickest, easiest methods to gain entry.

The photos are great, and the techniques for opening are detailed and easy to follow. As regulations have tightened, gun safes have been one of the fastest growing segments of the safe industry, and now we put you in control when you have to open one of these babies. *Gun Safes* will help you make more money, that's for sure. For more details, see page 119.

The second of Dave's new books is called *Ask Dave*. This book features tons of photos, opening

techniques and identification methods. For years, locksmiths have been asking questions of Dave when they ran into problems in the field, and Dave saved all his photos and answers, and has now compiled them into this excellent manual. If you've ever had a question or problem with a safe or a vault, chances are you'll find answers here!

Having your own copy of *Ask Dave* is the next best thing to having a world class expert come to the job with you! For more information see page 69.

Last month I wrote about our new SECURITY SOLUTIONS program. This month, let me just remind you that this is a program that I really believe in.

Most locksmiths are small business, and this means that time to go out and build new and profitable business is very limited. The SECURITY SOLUTIONS marketing program, which gives your business its own personalized newsletter to promote your company, costs less than \$100 and works to grow your profits for a whole year. We hope you'll join.

Marc Goldberg

Marc Goldberg
Publisher



Join our free E-mail list!

Receive locksmith info by E-Mail
Write us at: NATLOCK@aol.com

January 1998 • 5

Mango's Message

Every once in a while an event occurs that can, and many times does, have an impact on our lives that will change the way we think, act and function. Often, because of such an event, what was once taken for granted, is suddenly a privilege. Where once there was free access, there may now be restrictions, and more often than not, it's a security issue of a global, national or local concern.

When the Oklahoma Federal building bombing occurred on April 19, 1995 suddenly the entire nation was on red alert. Federal buildings were barricaded off and new safety measures were being implemented. Security was heightened and tensions ran high.

When the World Trade Center bombing occurred on February 26, 1993 nobody was prepared for, or could have anticipated, such an attack. However, since the World Trade Center bombing, the reality that a calculated catastrophe can occur in our back yard has heightened awareness of security and extra precautions are being taken.

When the Trans World Airlines (TWA) Flight 800 exploded that fateful night of July 17, 1996 the first proclaimed cause was a terrorist bombing. Although that has been proven untrue, since that time, all domestic and international airlines have greatly increased their security measures. Baggage is more closely checked than ever before. You are now asked if you packed your bags yourself; if anyone unknown to you asked you to carry anything and whether your baggage has been in your possession at all times. Bags cannot be left unattended at any time on airport property without risking an interrogation by security personnel. Security was never this tight before the demise of Flight 800.

The examples given are a few events that have had a lasting impact on our lives in one form or another, directly or indirectly, whether we know it or not. In every incident, a tragedy caused a change in the way we think, act and function. Unfortunately, in most instances, it is the occurrence of a tragedy that is necessary before we change the way we think, act and function.

Recently, the story of a rather freak accident was circulating that if true would have a lasting impact on this industry as a whole. When I heard about it I knew this was the big one. If the facts bared out, the complaints

Fact or Fiction "Uncovering the Airbag Missile Mystery"

by locksmiths about police opening cars would suddenly cease. The men in blue would be on notice that opening cars could be "deadly," and a huge liability risk for the police department. This was serious stuff.

It was a chilly Chicago morning. The northern wind was slapping against my office window causing a breeze to seep through the brittle cracking putty between the window panes. After filling my I-V feeding bag with hot chocolate (extra chocolate) and cleaning the drip valve, I sat slumped behind my desk waiting for the soothing warmth to thaw my fingers for their daily marathon run on the keyboard, and the high glucose content to jump start my heart.

Sitting there still half comatose, Jeff Adair (our Director of Sales & Marketing) poked his head over my office divider with that look of eager enthusiasm on his face.

"Hey Greg, I just spoke to someone that said they heard that a police officer in Ohio was opening a new Honda Accord with a Slim Jim when the side impact airbag deployed, projecting the Slim Jim through his throat!"

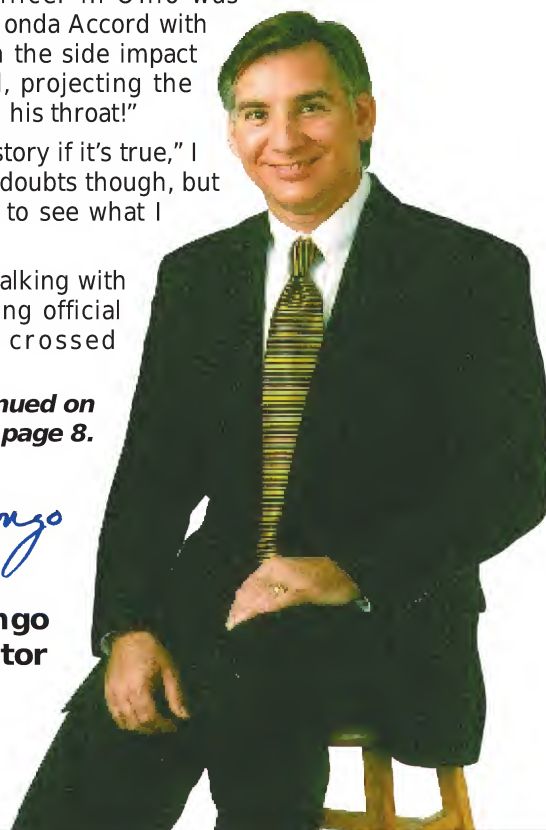
"That's a big story if it's true," I said. "I have my doubts though, but I'll check into it to see what I can find."

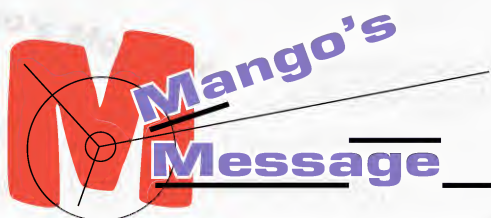
Shortly after talking with Jeff, the following official police memo crossed my desk:

**Continued on
page 8.**

Greg Mango

**Greg Mango
Editor**





Continued from page 6

A LEIN 93680 09/25/97 1531 GBDC.
A ELOP; GBDC.
ADMINISTRATIVE MESSAGE FROM MSP SPEC
OPERATIONS DIV
GBDC #129

REF***** OFFICER'S SAFETY CAUTION *****
THE NATIONAL INSURANCE CRIME BUREAU (NICB)
OUT OF CHICAGO HAS JUST INFORMED US OF A
POTENTIAL SAFETY ISSUE DEALING WITH SIDE
IMPACT AIRBAGS.

RECENTLY A HILLSBORO COUNTY, OHIO
SHERIFF'S DEPUTY WAS SEVERELY INJURED
WHILE ATTEMPTING TO UNLOCK A HONDA ACCURA
WITH A SLIM JIM TYPE TOOL. THIS VEHICLE
WAS EQUIPPED WITH A SIDE IMPACT AIRBAG
THAT DETONATED WHILE ATTEMPTING THE
UNLOCK. THE AIRBAG FORCED THE SLIM JIM UP
THROUGH THE DEPUTY'S THROAT CAUSING
SERIOUS INJURY.

ANY OFFICER ATTEMPTING TO UNLOCK A VEHICLE
IN THIS MANNER, SHOULD QUESTION THE OWNER
AS TO WHETHER THE VEHICLE IS EQUIPPED WITH
SUCH AN AIRBAG AND USE EXTREME CAUTION
WHILE DOING SO.

AUTH; MSP - LCID/AUTO THEFT UNIT
MSP-LCID/ATU AUTH; D/SGT. HARSHBERGER
OPR; HARSH
MSP OPERATIONS LT. CIARLINO E/D MOODY.

For a journalist, there is nothing that will get the heart
pumping and the fingers smoking like a good story, and
it was looking like this was it. Ripping the chocolate
filled I-V needle from my veins, I assigned my assistant Kelly
"The Blood Hound" Quinn to the fact finding trail.

After contacting the Times Gazette in Hillsboro, OH,
regarding this story, they said they had no knowledge of
this incident. This was not a good sign. I assumed that if in
fact this event did occur, it would have been covered by the
local media. This would be big news in a small town.

Kelly then spoke with Edwin Sparkman, Sr. Manager,
Operations Support with the National Insurance Crime
Bureau (NICB). The NICB works closely with police
departments and often deals with vehicle entries that go
awry, such as linkage disconnects, broken windows, etc.

Sparkman faxed us a copy of the following document
that the NICB dispersed regarding this issue:

NOV - 5 - 97 WED 14:46
Date: Wednesday, 5 November 1997 13:37 CT
To: MGT. LIST
Cc: SPECIAL AGENTS
From: EDWIN SPARKMAN
Subject: Airbag Safety
To Special Agents and Managers:

This is the follow up message to the Airbag Safety e-mail sent
September 26, 1997 by Dan Abbott. That e-mail mentioned an
unconfirmed report of an injury sustained by an officer using a

"Slim Jim" to open a locked vehicle equipped with side impact
airbag. According to the unconfirmed report, while the officer
was using a "Slim Jim" attempting to open the drivers door, the
side impact airbag deployed, forcing the "Slim Jim" into the
officers throat, causing serious injury.

The Montgomery County Police Department (Maryland) officer
who originated this report can not validate the incident. The
officer stated he was standing outside the Montgomery County
Police Station when he was approached by an individual who
identified himself as a police officer from Ohio. They began
talking and the "Slim Jim" incident was mentioned by the Ohio
officer. After their conversation, the Montgomery County PD
officer relayed the information to his superiors, who later sent it
out on an Intelligence Bulletin to other police departments. The
Montgomery County PD officer did not obtain, nor can he
remember, the name or department of the individual who
informed him of this incident.

In an effort to determine the validity of this report,
we have contacted the Ohio State Police, who have
no report of such an incident. In addition, an
NLETS injury message was sent to all Ohio
law enforcement agencies requesting any
information concerning this incident. In
the three (3) weeks since the NLETS
message was sent, we have received
no responses.

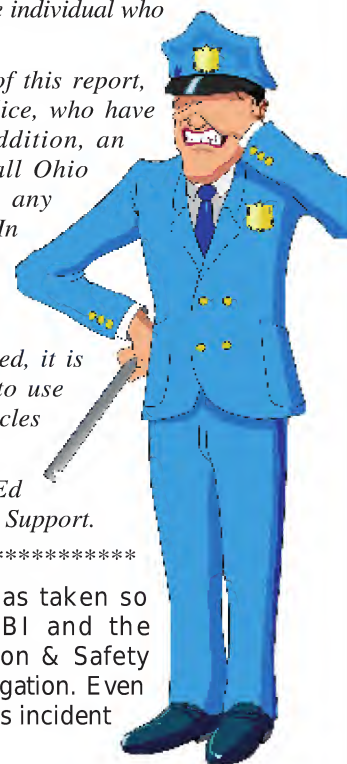
While this incident remains unconfirmed, it is
imperative that all agents remember to use
care and caution when inspecting vehicles
with non-deployed airbags.

If you have any questions, contact Ed
Sparkman, Senior Manager, Operations Support.

This story went so far and was taken so
seriously that even the FBI and the
Department of Transportation & Safety
(DOTS) were involved in the investigation. Even
though the story appeared factual, this incident
was just rumor and never did occur.

According to the Department of Transportation &
Safety, Honda was notified of this story and was asked to
replicate the side airbag deployment in the same manner...
with a Slim Jim. According to a Honda spokesperson, it is
impossible to cause the side airbag to inflate in this
manner. However, Honda did caution that it may be
possible to cause damage to sensors, the wiring harness or
connectors, resulting in a failure of deployment.

Even though this event did not prove to be the turning-
point in the way police think, act and function when opening
cars, I'm sure it will cause a few within the law enforcement
community to think twice when providing such services for
the public good. Fear of the unknown will not stop all, but it
may curb a few. That alone is a step in the right direction. **TNL**



J a n u a r y 1 9 9 8

Letters

The National Locksmith is interested in your view. We do reserve the right to edit for clarity and length.

AAA Today

This letter is in reference to "Mango's Message" on AAA and GM's RNC Change to AAA. First of all, yes I am aware of the AAA situation. I have been performing jump-starts, gas/diesel, delivery, and flat changing service to the customers of Chevrolet, Geo, and the Pontiac division since GM's creation of their roadside assistance program.

I contacted AAA at their Bluefield, West Virginia office and spoke with a representative about getting an application to do business as I had done in the past for RNC. I was told firstly that they weren't taking any new vendors at the time. Second she said that the service fee they would pay is based on that of West Virginia. Third she said that our insurance requirement is \$775.00 per roadside vendor.

Just thought you'd like to know.

*John Catchall
E-mail*

It's an Outrage

I read about ALOA in every locksmith magazine that I get, and I am tired of it. They have done the locksmith a great injustice. I almost joined ALOA a couple of years ago, but then I found out that they agreed with police on the subject of police opening automobiles. They think it is okay for the police to rob the locksmiths.

I have spoken to a state legislator and he said that ALOA helped push the bill through that forces the locksmiths get a license to install or work on electrical locks, etc. in Texas. You can pat ALOA on the pedestal all you want to, but it won't change their color. If I was a member of their organization I would withdraw my membership today. That is what all locksmiths should do.

I also found out that you do not help the struggling locksmith, but cater to the ones that make the big money. When I called Greg Mango and asked him about this he acted like I had offended him. He cut me real short. I don't bother to read his Mango's Message anymore and am telling other locksmiths about it. They are having trouble with the police robbing them also.

Thank you for your time.

*George Grantham
Texas*

Editors Note: Due to Mr. Grantham's opinionated and somewhat contemptuous comments, I felt it was only fair and necessary to give ALOA the opportunity to respond. The following is ALOA's comments:

ALOA Responds

Mr. Grantham, please believe that I share your frustration concerning



the issue of our law enforcement community opening cars in "Non-Emergency Life Threatening" situations. I tried for several years as the Chairman of the ALOA's Legislative Committee to find a solution to the problem. The only solution, as a State Judge in Mississippi concerning a lawsuit on this issue before dismissing the case stated, is to take it to the Legislature.

This same answer is apparently the only one we have for many of the problems facing our industry today. Problems such as: preventing non-locksmith/security personnel from purchasing the tools of our trade; establishing a "legal" definition of "Locksmith;" protecting the consumer from unscrupulous persons practicing our trade; and preventing other trades from legislating away parts of what we do.

ALOA does not "think it is OK for the police to rob the locksmiths" as you stated, but it is the "law" that gives the police the right to determine what is in the best interest of "public safety." If you really feel that strongly

Continued on page 12

The National Locksmith
1533 Burgundy Parkway
Streamwood, IL 60107
Attn: Editor

Continued from page 10

about this issue, please join with other locksmiths in drafting local legislation to do something about it.

Your statement saying ALOA helped push through Alarm Legislation that prevents electronic lock work by locksmiths in Texas is completely untrue. I would like to have the name of the State Legislature who told you this. I can give you a list of several thousand people who know different. ALOA members who read KEYNOTES and other trade magazines know the details of what happened in Texas.

You read often about ALOA in trade magazines because it is the only nation wide association that tries it's best to fight for you and all locksmiths in America. Now, I am the first to admit ALOA is not perfect and may have been slow to respond on some issues in the past, but not in the future. I challenge you to take a chance, join ALOA and get involved.

*Dallas C. Brooks
ALOA President*

According To the Law

There has been a lot of debate over tow truck drivers and others having the tools of our trade. In the code of VA section 18.2-94, it says that if any person has in his possession any tools, outfits, or implements with intent to commit burglary, robbery or larceny, upon conviction he shall be guilty of a class S felony. The possession of such burglarious tools, implements, or outfit by any person other than a licensed dealer shall be prime evidence of an intent to commit burglary, larceny, or robbery.

In RN under 39-14-701, a person who possesses any tool, machine, or implement with intent to use the same, or allow the same to be used to commit any burglary is guilty of a class A misdemeanor.

Seems to me that there are a lot of "criminals" in possession of such tools.
*Charles Osborne Jr.
Virginia*

Good-Bye to Kenco

I received a notice saying that Kenco is going out of business. I would like to say that they will be missed by myself, as they provided me with a lot of hard to find parts and great service over the

several years I did business with them. In this time, it is always sad to see a long time supplier of quality products leave the field. Sorry to see them go.

*Clyde E. Brooks
E-mail*

Reversal of Fortune

Several months ago I started a heated discussion on-line about "Do Not Duplicate" that involved a salesman from Best telling my customer that they could only get Best keys from Best.

Last week I removed 126 Best cores and replaced them with Kaba Peaks, and you can't get Kaba blanks from Best. What a good feeling.

*Lenny Wollitz
Minnesota*

In Defense of Roadside Assistance Clubs

It seems that I can't pick up a trade magazine anymore without reading about someone slamming motor clubs such as CCMC, RNC, AAA etc. Well, you guys better wake up! Who else do you think reads these articles? Yes, that's right, the motor clubs!

While you think that you are doing the locksmith world a great service by these letters, you're actually hurting us. The road clubs are getting tired of reading these letters as well, and are drifting toward sending the work to the tow services. That's right, they can open cars too! They welcome the clubs with open arms. Of course you know that, based on the number of letters written about tow companies taking away our car openings. Well you can't have it both ways.

The motor clubs are in a fight for their lives with competitive bidding just like we are with the trunk slamming know nothings, deluding the general public into thinking they are locksmiths. If the motor clubs don't keep their rates down when they bid a contract, they won't have a job, thus we don't get work. Case in point, AAA just got General Motors Roadside work! So before you put your idle fingers to work slamming the clubs, I suggest you spend the time cleaning up your truck, shop or personal appearance. Based on what I've seen at shows, odds are you probably need it!

If you want to take action with the

clubs, call them personally. I did and worked all my problems out. So the next time you think you're doing us a favor with these insulting letters, keep me out of it. I don't need your help.

*Paul A. Keen Jr., CPL
Pennsylvania*

What Can We Do?

At a recent Bill Reed and Steve Young seminar, I talked with a fellow locksmith from Henderson, Kentucky about doing roadside service calls for various automobile manufacturers. We were both commenting how this was a great time saver for us and the customer.

I do roadside service for all the large manufacturers. They are all very helpful and great people to do work for.

The locksmith I mentioned before said that Buick Roadside Service will no longer give out codes to locksmiths. Approximately two days later, I received a call to replace lost keys on a 1995 Buick. I went through our normal procedure with Buick Roadside Service. We were also told that they no longer give out codes to locksmiths. The representative told us this took effect on August 1, 1997.

The reason this has been done, according to the representative, is because the companies who repossess automobiles have been getting codes when they should not have been, and have been using them to repossess cars.

I want to know if you can think of a way we as locksmiths, can work with the manufacturers roadside service so that we do not lose all the benefits of working with them. The idea I had was to assign each locksmith a pin number or password. The roadside services would be able to verify the company calling for codes as a preferred locksmith with their service.

I would appreciate your comments on this situation and would like to hear from locksmiths who use this service. We need to work fast before we lose the opportunity to provide prompt and efficient service to our customers.

*Kenneth Nutt
Indiana*

TNL

Security Café

**DROP IN FOR
TOOLS, TECHNOLOGY
& EQUIPMENT**

Abloy Disklock Pro



Abloy Disklock Pro rotating disc lock mechanism is close in principle to the rotating tumblers in a safe. This unique construction makes the cylinder virtually pickproof. Pro cylinder offers 1.97 billion combination possibilities on each key profile, which allows the creation of even the most complicated custom designed masterkey systems.

Cliplite by IP Tools

Cliplite is an inspection light that attaches to rod type car opening tools with the light bulb near the working tip. This eliminates juggling a light in one hand and your tool in the other. It's flexible clips will fit tool diameters ranging from 1/8" to 7/32".



Cliplite uses a miniature Christmas tree light bulb that is inexpensive and durable.

Chicago Lock Company Offers Steelcase Replacement Parts

Original patented factory Steelcase replacement parts are now available from Chicago Lock Company. With millions of Steelcase desk locks now in use, this becomes a tremendous

replacement market. With the use of our removal tool, these parts retrofit in seconds.

Steelcase replacement parts now in stock include:

□ Complete Plug Assembly P1076 Series

□ Plug-Sub Assembly - retaining Tumbler only - CP1076 Series

□ Key Blanks K-101-H to K-104-H

□ Removal Tool



Midland's New Bantam Series

A new line of Syn-Tech Bantam multi-mode FM two-way under dash mobile radios has been introduced by Midland USA, Inc. of Kansas City, MO. Two models are available initially: Model 70-1337B and Model 70-1527B. Both units offer 20-channel wide band coverage with a choice of 136-174 Mhz VHF or 450-470 Mhz UHF to meet business and industrial applications.



NT Falcon New Grade 2 Cylindrical Keyed Lever Locks

Strength, security and simple through-bolted mounting are all benefits of NT Falcon Lock's new B Series Grade 2 key-in lever locksets. The brand new B

Streamlight Unveils New Convertible Flashlight

Streamlight has introduced a versatile addition to its line of convertible hand-held/head lamps. Simply called WOW, the compact flashlight offers



the multiple advantages of a rugged hand-held light and a versatile hands-free lamp, which can be worn around the head, hung around the neck or suspended above a work area.

As a hand-held flashlight, WOW is a compact, durable unit that is powerful and simple to operate. When hands-free operation is required, the unit's uniquely-designed handles rotate open and the adjustable elastic strap fastens the light comfortably and securely around the head.



Series product is NT Falcon Lock's first cylindrical key-in-lever lockset for Grade 2 applications. The B Series is designed to exceed the new ANSI A156.2-1996 standard for bored locks and latches, including all strength and operational requirements.

Optex Sensor Light



Optex America, Inc. is proud to announce the release of the LA-30 (E), Solar Powered Sensor Light. This compact sensor light is completely self contained getting its power from the sun. No more messy and costly wiring. The weather-proof design and convenient Wall or Vice mounting allow the unit to be easily mounted just about anywhere.

M.A.G.'s Full Lip Strikes

To replace scratched, worn-out and painted-over strikes, M.A.G. Security has introduced decorative Full Lip Strikes.

Available in three attractive finishes (antique brass, brass and chrome), the new product adds a finishing touch to door areas as it replaces older, damaged strikes. Easy to install, the Full Lip Strike features an adjustable tang that eliminates door rattle and assures a proper lock operation and door fit. The

SECURITY CAFÉ

strike's curved shape is less likely to catch a pants pocket on its edge.



Safe Chariot by Defiant Safe

Defiant Safe Company is pleased to announce the Safe Chariot Model. Originally designed to carry loads up to 2,500 pounds, this upgraded unit has a carry capacity of 3,000 pounds.



The Safe Chariot can be towed with any of your existing service vehicles. There are no hydraulics, batteries, or electrical power hookups required, only a standard light plug. With few moving parts, maintenance is extremely low. Low insurance costs and the available lease/purchase plan make this a very profitable piece of equipment.

Buddy Products Safetyware for Locksmiths

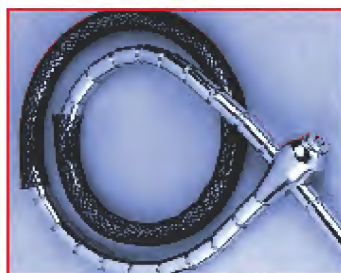
Buddy Products has introduced a new line of illuminated vests, belts and armbands for locksmiths for use in situations where the locksmith needs high

visibility, such as standing on a busy street or highway while opening a car. Buddy uses a proprietary technology that radiates and flashes its own light from high intensity Light-Emitting Diodes (LED) encased in a magnifying lens. The LED'S can be powered for up to 200 hours by standard batteries which operate in small, efficient power packs.



Cobralinks Features Case Hardened Steel Links and Head

Cobralinks Locking System in a carbon steel cable with case hardened steel links and head to provide the user with the flexibility of cable and security of hardened steel. The tail links slide through the head and lock in place with a steel tang to allow adjustment of the working length. All components are fully hardened and can not be drilled.



Cobralinks SL Models are 3/4 inch (19.1mm) diameter links, STD Models are 1 inch (25.4mm) diameter links. Cobralinks are available in 4 through 12 foot lengths to meet all your security needs.

A-1's PAK-MS1

A-1 is pleased to introduce the

PAK-MS1. This is a new packaged set of the PAK-A-PUNCH. This set includes a PAK-3 Code Cutter plus all accessories for punching popular domestic applications. Additional applications are available for all automotive such as: G.M. 10-Cut; G.M. 6-Cut; Chrysler double-sided; Ford 10-Cut; Ford 8-Cut; plus some late model Jeep; Eagle and Mazda's. There are also applications available for Kwikset; Schlage and I/Core.

NanoLox-B by Nanotechnology

NanoLox-B is a push-button electronic access control system which uses a revolutionary patented technology to enable a battery pack (3X AA alkaline) 5 year/2,000,000 operations at normal traffic. Incorporating a Schlage Rhodes lockset. The NanoLox-B250 and -B125 provide 253 and 125 factory-programmed codes,



respectively. Through the keyboard, a user, in about 15 seconds, can easily: (1) activate or deactivate groups of 32 codes or an individual code, (2) change an individual code, or (3) adjust code length from 3 to 7 digits. The system also features two levels of master codes, lock-out mode, and key override. **TNL**

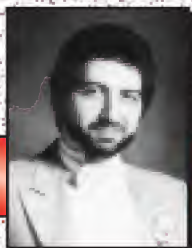


**ASP - Your Auto Service
Center for the World**

[Click here for more information](#)

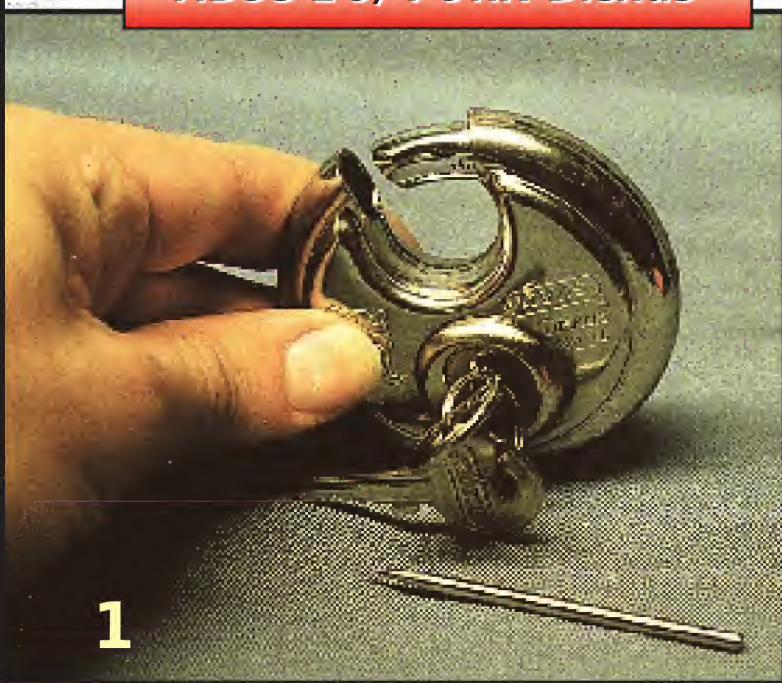
**COVER
STORY!**

REKEYABLE PADLOCKS



by **Sal Dulcamaro, CML**

ABUS 26/70RK Diskus

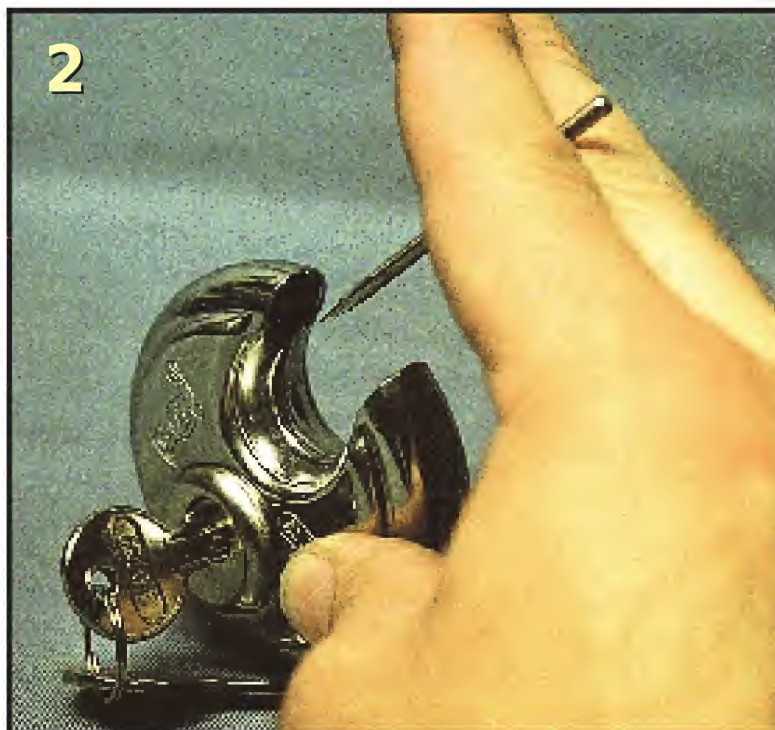


1

Abus has introduced a rekeyable version of its Diskus padlocks. The one shown is a prototype, so it has the markings of the non-rekeyable Diskus #24. The production models will be marked as 26/70RK Diskus. The Diskus padlocks are unique in their construction compared to standard padlocks. The shackle rotates within the lock case rather than pulling out of the padlock body. When attached to a hasp, the narrow exposed area of the shackle limits the effectiveness of a bolt cutter. There are two deadlock levers on the shackle which are patented. Other brand Diskus look alike padlocks do not have them. The cylinder release "lance," in front of the lock, will have a handle on it for the production units.

Today, a rekeyable padlock is almost as common as a non-rekeyable. Almost all manufacturers have in their line a rekeyable padlock or two for the offering. While many are keyed in similar fashions, there can also be dramatic differences.

This month we will cover a few such rekeyable padlocks in a meat and potatoes photo story fashion, focusing on the keying procedures of each.



2

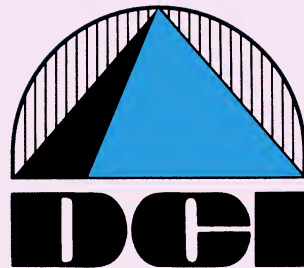
To rekey this lock, first rotate the shackle out of the way. The lance is then inserted into the opening, angled somewhat downward, in order to release the lock cylinder for rekeying.



3
The lance has engaged the mechanism, which pushes back the spring loaded retainer plate. The cylinder and its surrounding housing has been removed.

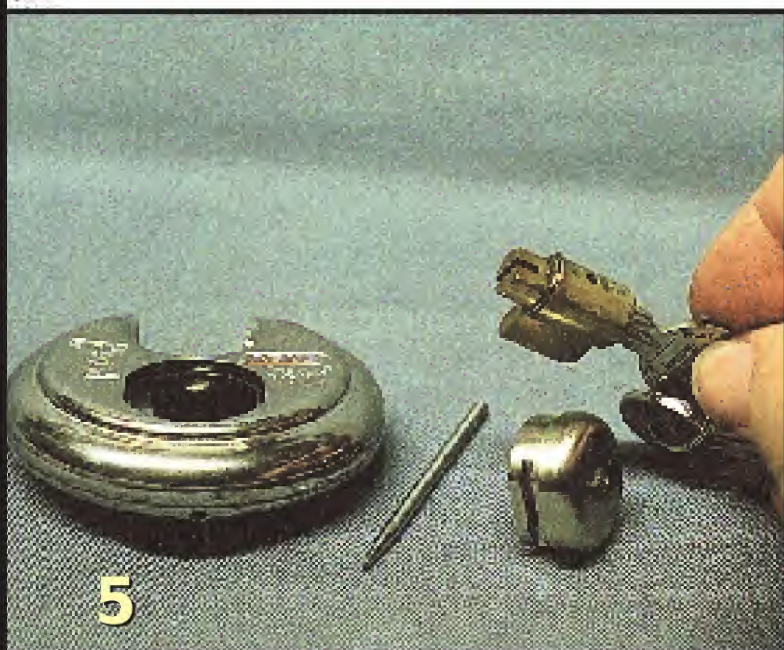


4
By removing the lance, the spring loaded retainer moves back into position to try and re-engage the housing that contains the lock cylinder. Normally it would engage the slot on the left side of the (removed) housing, to retain it in the padlock body.



***We have it all.
Quality, Value,
& Service.***

[Click here for more information](#)



5

The lock cylinder is out of the housing and ready to be rekeyed. This cylinder has four pin chambers, but the 26/70RK will have either a four or five pin cylinder. It will be available KD, KA and can be master keyed by a locksmith with a pinning kit to be introduced. "0" bitted cylinders as well as KD, KA and some MK will be available to purchase separately.

American 700 Series



6

The newest solid steel padlocks from American Lock is the model 780 on the left and on the right model 790. These feature the new wide clearance shackles. The 780 has a 2 inch wide lock body and a 1-1/4 inch wide interior clearance for the shackle opening. The 790 has a 3 inch wide body and a 1-5/16 inch interior clearance. They are designed for special applications where a standard padlock's shackle opening is too narrow.



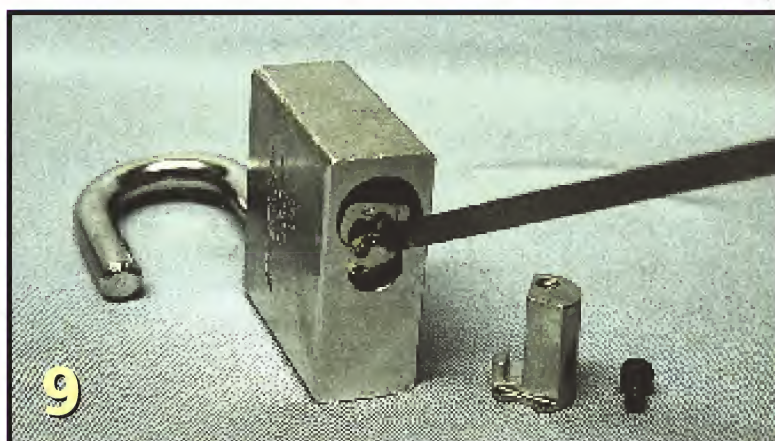
7

The cylinder housing and cover plate is visible on the bottom face of the padlocks. They are very strong to resist cylinder pulling. The cylinder housing is retained by a screw concealed inside the shackle hole.



8

Rotating the key clockwise to release the shackle, the shackle must be pulled outward manually because there is no shackle spring. Inside the shackle hole is an Allen head machine screw. A 5/32 inch Allen wrench is required to remove the screw.



9

With the retainer screw removed, the cylinder retainer housing has been removed. The cover plate can then be lifted out of a machined slot toward the bottom face of the padlock. Because of the construction of the retaining housing and cover plate, it would be highly unlikely that a pulling device would be able to pull the lock cylinder from inside the lock body.



10

The lock cylinder is now easily removed for rekeying or servicing. It comes standard with a six pin cylinder and can be keyed to most other popular American pin tumbler padlocks.



11

The shackle can also be changed quickly and easily by using a 1/8 inch Allen wrench to remove the shackle retaining screw. The shackles are made of boron alloy steel. The model 780 has a 7/16 inch diameter shackle and the model 790 has a 1/2 inch shackle.

Federal 900 Series



12

The Federal model 900 is a solid steel "round" body padlock. It comes standard with a rekeyable cylinder that has a keyway compatible with American Lock padlocks.



**The Innovation You Expect, with the
Flexibility You Need!**

[Click here for more information](#)



13

Cylinder retainer is held by a Phillips head screw accessible through the shackle hole. After unlocking the padlock, the spring loaded shackle will be pushed out and the retainer screw will be exposed to view. The screw is easily removed with a common screwdriver.



14

With the screw removed, the retainer will come off at the bottom face of the padlock, and reveal the lock cylinder contained within the lock body.



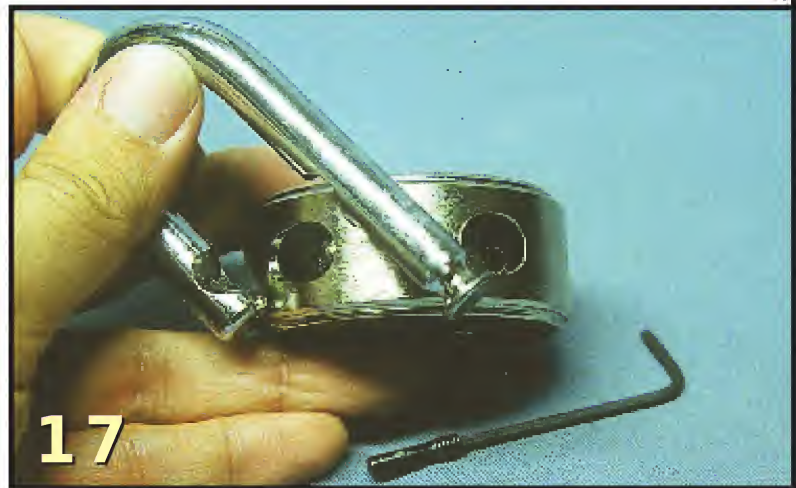
15

After removing the lock cylinder, it can be rekeyed or serviced. The cylinder has six pin chambers and is coded as such. It can also be keyed to match a five-cut key.



16

The quick change shackle is easily changed by removing the shackle retainer screw with a metric 2.5 mm Allen wrench on the back of the lock body.



17

Shackle spring is visible inside the heel end shackle hole. Replacement shackles are available in various lengths and materials.

Master 27 & Pro Series



18

These are two laminated body rekeyable Master padlocks. A model 27 is at the left and a Pro Series 6325 at the right. The model 27 has a 2 inch wide laminated steel body, with a 7/16 inch diameter hardened steel shackle. The Pro Series model 6325 padlock has a 2-3/8 inch wide plastic coated laminated steel body, and a 3/8 inch diameter shrouded shackle. The shackle is made of a hardened boron alloy.

Continued on page 24

Continued from page 22



19

Locks have a cylinder retaining plate that is secured by a 7/64 inch Allen head screw. The model 27 has a shackle spring, but the Pro Series padlock does not.



20

Removing the screw and cylinder retainer, the cylinder can now be removed for servicing or rekeying.



21

Both cylinders have been removed from the padlock bodies, exposing the cylinder cavities inside the laminated steel cases. Although they both require a 7/64 inch Allen wrench for removing the cylinder retainers, the physical design of the retainer plates differ.



22

Lock cylinder for the model 27 is a five chamber cylinder. The Pro Series cylinder is drilled for six chambers but is currently only coded to five.

Almont Re-Key



23

The Almont Re-Key padlock is a rather interesting rekeyable padlock. It is available in either 1-1/2 inch or 1-3/4 inch padlock body versions, but all are key retaining in function. Available in 14 different keyways, there is an Almont lock that can be keyed to most any common commercial keyway.

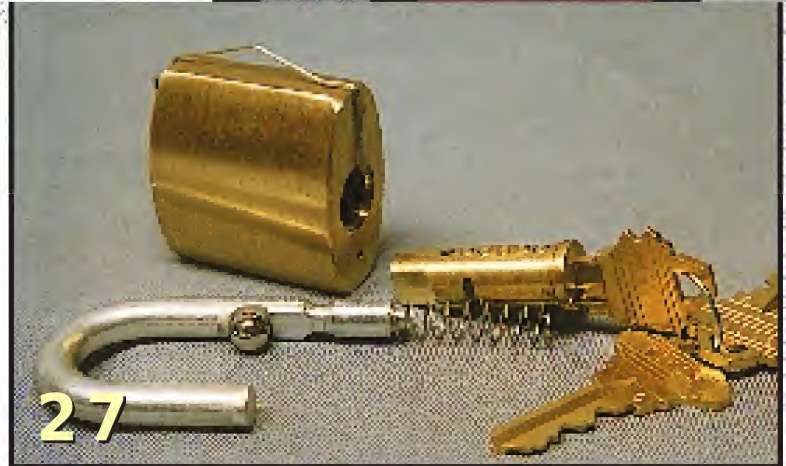
Continued on page 26

Continued from page 24



24

The Almont padlock and servicing tools needed to rekey the lock. To the right of the padlock is a modified operating key with a notch on the bottom at the tip end. This modified key is necessary for plug disassembly. The bent wire tool is necessary to retain the top pins and tumbler springs when removing the plug for servicing. In front of the padlock are tools used for loading the top pins and tumbler springs. The device that looks like a cylinder plug is called the loading tool. Within the flat keyway of the loading tool is a tool appropriately called the "flat tool." It is a flat piece of metal with a tapered tip surface designed to push top pins and tumbler springs up into the top pin chambers. Between the padlock and the loading tool is a hollow brass tube called the sleeve.



27

With the plug removed the shackle will also come out. The tail end of the plug normally keeps the locking ball pressed against the shackle. When the plug starts to come out of the lock, the shackle spring tries to push the shackle outward. At the same time, the locking ball gets pushed into the empty cavity where the plug used to be.



25

To rekey, insert the modified key and rotate until the slot is in the 12:00 position. The notch in the key should be cut with about 3/32 inch of material removed from the bottom surface of the key and going back about 3/8 inch from the tip end.



28

The loading tool and sleeve is used to load top pins which are loaded first into each of the first five chambers, then tumbler springs are loaded on top. The tumbler springs are then compressed and the sleeve is then slid over to contain all. Before reloading the upper pin chambers, the locking ball that goes on the same side of the upper pin chambers should be reloaded. The padlock body should be placed so that gravity will keep that locking ball in place until the loading tool is fully inserted.



26

Next, insert the wire tool into the slot. The formed shape of the wire tool is designed to help it stay clipped to the padlock body while removing the plug or re-installing it back into the padlock. The straight bottom portion should be pushed all the way in, until the 90 degree bend of the tool stops at the bottom face of the padlock. With the wire tool inserted, remove the plug.



29

The loading tool positioned so that pin chambers in the top and bottom are not directly aligned. If it is positioned with the chambers in alignment, the tumbler spring will force itself into the wrong upper pin chamber and trap the loading tool. The sleeve stops at the front of the padlock's plug opening, while the loading tool is pushed inward.



30

With the loading tool fully inserted in the lock, the sleeve is removed allowing the force of the compressed tumbler springs to push them from the loading tool into the empty upper pin chambers. The flat tool is then inserted into the open keyway slot of the loading tool, to force the top pins also into the upper pin chambers. The flat tool should remain inside the keyway of the loading tool while the loading tool is rotated slightly clockwise. It should be rotated so that the slot (identical to the one in the cylinder plug) for the wire tool is directly in line with the upper pin chambers.



31

The wire tool should then be inserted to retain the top pins and tumbler springs inside the upper pin chambers. The loading tool (and flat tool) can then be removed.



32

Because the shackle and the second locking ball are probably still not in place yet, that will be the next order of business. The lock plug can then be installed in the body and the wire tool can then be removed.

TNL



HPC, Inc.
Designing Excellence and Manufacturing
Quality since 1956

[Click here for more information](#)

BUSINESS BRIEFS

All-Lock LT 6273 VATS Decoder

Compact and at roughly half the cost of a full decoder,



the All-Lock LT6273 reads the VATS value of existing VATS keys, allowing for quick, easy and concise key duplication. The durable LT6273 is made of solid state construction in a finely finished metal container. A large, clear LED display makes reading the key easy. Operates on one 9V alkaline battery.

For more information call: 800-257-8685. Canada: 800-465-5761.

Mas-Hamilton Acquires Vindicator

Mas-Hamilton Group, Inc., has announced its acquisition of Vindicator Corporation, a leading manufacturer of electronic safe locks based in Austin, Texas. Terms of the acquisition were not disclosed.

Mas-Hamilton plans to relocate Vindicator's manufacturing, customer support, marketing, and product design facilities to its headquarters in Lexington, Kentucky.

U.S. Lock Relocates

U.S. Lock has relocated its Louisville, Kentucky branch

to a larger more modern facility. U.S. Lock's growth in the region initiated this move so the company would have additional space in order to service its customers in the region more efficiently.

ROFU's National Sales Manager

ROFU International Corp. announces the appointment of Robert E. Schaeffer as National Sales Manager. Schaeffer comes from a similar position with Dunbarton Corporation and has over ten years experience in the industry.



**Robert E.
Schaeffer**

Rutherford Controls New Design

Rutherford Controls Inc. announces a new design for the latch keeper on their adjustable 7 Series electric strikes. The new, thicker and rounder shape prevents the door from "hanging up" on mis-aligned narrow line aluminum doors with no gap.

Trine Names Two to Management Positions

The Access Control division of Trine Products Company has named Glenn Walter, Regional Sales Manager and Gary Ferguson, Technical Support and Training Manager.

Schwab Renews 125 Year Commitment

Schwab Corp. was founded in Lafayette, Indiana



in 1872 and has been a mainstay ever since. Even though they are moving what little manufacturing was here to the main plant in Cannelton, all management and administrative functions will stay in Lafayette.

Web Site Introduces REDI-LINE™ Generators

Pacific Scientific, Motor Products Division, announces the introduction of a new world wide web site for REDI-LINE Generators at www.rediline.com. Featuring an overview of REDI-LINE technology, the site also discusses applications, model selection criteria and basic installation information. The site address is: www.rediline.com.

Dorma Unveils Website

The DORMA Group has announced the availability of a new Internet website. The site can be accessed at www.dorma-usa.com. This site will be a resource for specifiers, architects, contractors, distributors and all others.

Margie Gobler Named President of STI

Margie Gobler of Waterford, Michigan has been named the new president of Safety Technology International, Inc. of Waterford, Michigan. She has been a key factor in the company's growth from a single product over a decade ago to a recognized world leader in the security/ fire alarm industry.

Sentry Security Fasteners Moves

Sentry Security Fasteners, Inc. has moved its company's

operations to a larger facility at 8208 N. University St, Peoria, Ill.

The company has also appointed Jim Rowley to the newly created position, Application Specialist. Jim has 20 years of experience in Commercial, Electrical, and Detention Hardware and has attended various hardware and electronic schools.

Sentex Names President and VP of Marketing

Sentex Systems is pleased to announce that Mark Stone has been hired as Sentex's new President and General Manager.

Michael Bates has also been hired as Sentex's new Vice President of Marketing and Customer Support.

Ott Joins Schlage

Willard B. Ott III has been appointed Business Development Manager at the Schlage Commercial Lock Division of Ingersoll-Rand Architectural Hardware Group. In his new position, Ott will be responsible for distribution channel strategy, competitor analysis, pricing policy, and new product launches.

Sales Manager Appointed by KABA

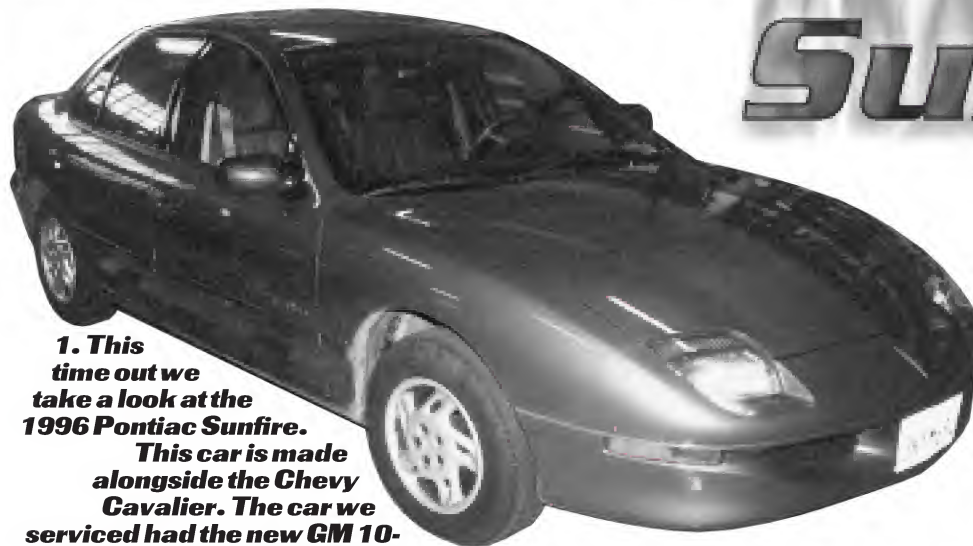
Fred DiMartino, a veteran of more than 20 years in the hardware industry, has been appointed Western Region Sales Manager for KABA High Security Locks Corporation. As an independent representative and a direct territory sales person, Fred has been directly affiliated with KABA for over seven years.



**Fred
DiMartino**



1996 Pontiac Sunfire



1. This time out we take a look at the 1996 Pontiac Sunfire.

This car is made alongside the Chevy Cavalier. The car we serviced had the new GM 10-cut locking system and is a one-key car.



by
Michael Hyde

OPENING TECHNIQUE



2. To open this car we used two wedges and a horizontal slide linkage tool. Insert the tool about six inches past the door handle on the passenger side of the car towards the front of the car.



3. Insert the tool straight down and make contact with the first horizontal linkage rod. Bind the tool and slide it forward to unlock the car.

IGNITION SERVICE

4. To remove the lock with a working key, you must first unsnap the thin plastic ring that encircles the ignition cylinder. Be careful as it can easily be broken.





5. Unscrew the three screws that hold on the steering column shroud. The two-piece shroud will now unsnap. Lift the bottom section of the shroud over the ears of the ignition cylinder and remove it. (There are a couple of companies that sell a specially bent tool that can depress the retainer without having to remove the shroud.)



6. With the shroud removed, insert the working key and rotate the cylinder to the "ON" position and depress the retainer that is located on the forward side of the plastic housing. The cylinder will not slide out.



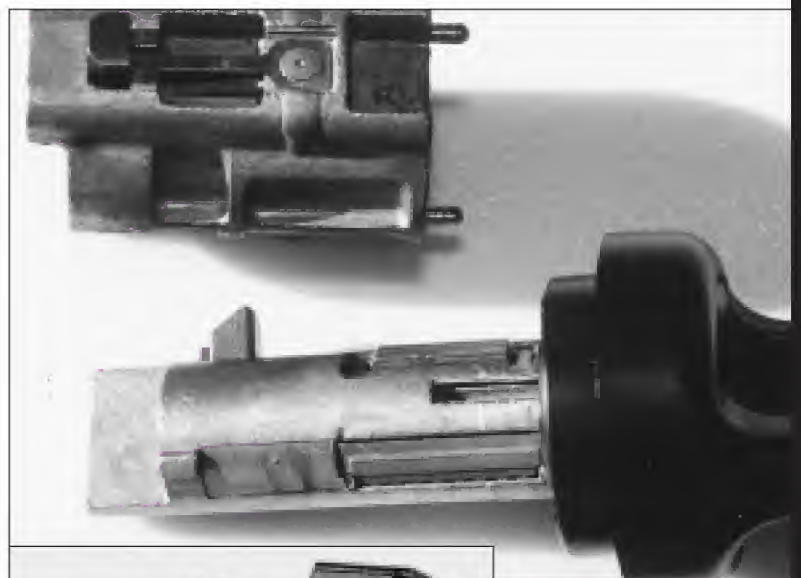
7. If you did not have a working key you could use a small screwdriver and wedge out the retainer. While holding the retainer

grasp it with a small pair of needle nose vise grips and pull out the retainer. By removing the retainer this way you may break the flexible spring steel unit that holds the retainer in place. The lock cylinder would then have to be replaced.

8. A close-up view of the ignition cylinder retainer is pictured in photograph.



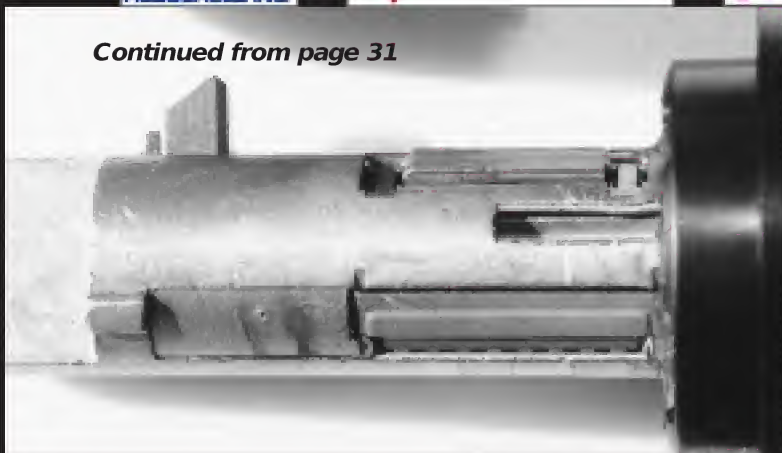
9. A close-up view of the code that is stamped on the cylinder housing. The code looks as if it was put on in a dot-matrix design, and can be difficult to make out the individual digits.



10. To disassemble the ignition cylinder, insert a working key, rotate the key about 1/3 of the way and then depress the retainer on the rear of the lock. The cylinder plug will now slide out. Be careful because the retainer is spring loaded and may want to go flying.

Continued on page 34

Continued from page 31



11. The ignition cylinder plug utilizes a sidebar and contains tumblers in positions 1 through 9.



12. The tumblers in the ignition cylinder are similar to other GM ignition tumblers. The tumblers are not interchangeable however.

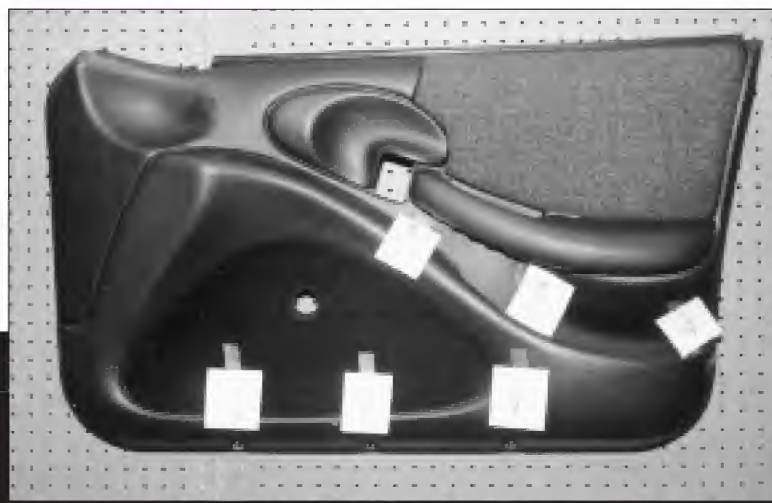
13. The door lock is separate from the door handle. At a glance the lock looks just like the old style side-bar door cylinders, except the keyway is not offset.



DOOR LOCK SERVICING



14. To service the door cylinder it is necessary to remove the inside door panel.



15. There are three screws on the bottom of the panel that must be removed. One screw on the edge of the panel to be removed and two screws under the armrest. Remove the window crank as well. The panel will now unsnap.



16. Once the trim panel is removed the lock can easily be removed. Note the linkage rods are fully exposed.

17. Once again the door lock looks very similar to many other standard GM door locks.





18. The lock uses the standard GM facecap, Strattec part # 321561. The shutter assembly is different and this car uses the new GM 10-Cut design. There is no side-bar in the door lock and it contains tumblers in positions 5 through 10.



19. The door & trunk tumblers are pictured in photograph.

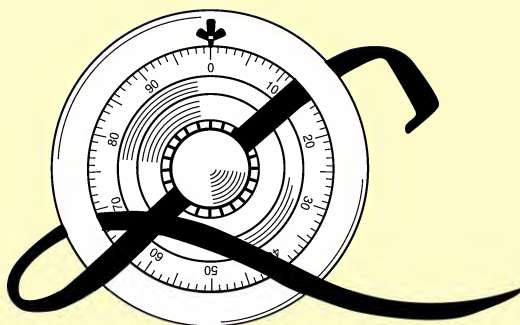
TRUNK LOCK SERVICING



20. To service the trunk lock it is necessary to remove the plastic light assembly that is mounted over the lock on the deck lid.



21. First remove the 13 nuts that hold on the light assembly.



**Lockmasters has a
44 year history of
training security
professionals.**

[Click here for more information](#)

Major
MANUFACTURING, INC.

Installation Tools
The Professionals Choice

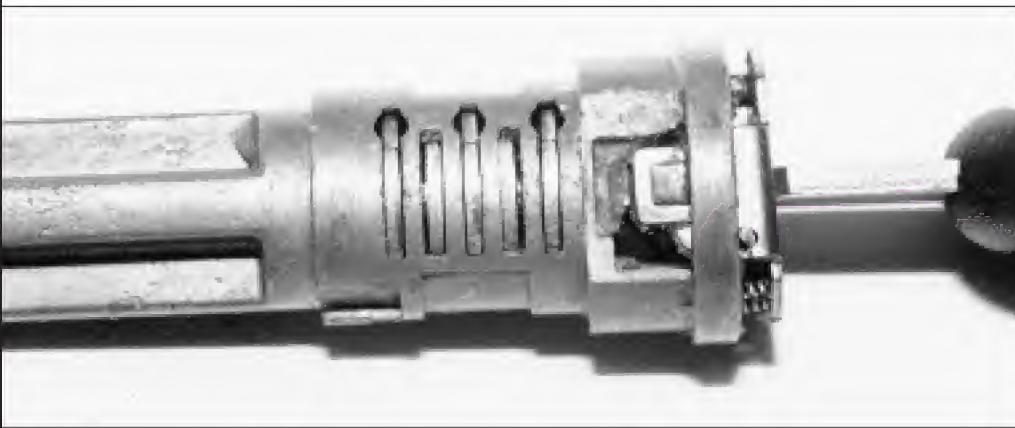
[Click here for more information](#)



22. Next unsnap the linkage cable that is attached to the rear of the lock and remove the cylinder retaining clip.



23. To disassemble the trunk lock you will need to have a working key to rotate the cylinder plug for removal. The cylinder plug is warded. The lock uses the standard GM face-cap, Strattec part # 321561.



24. The trunk cylinder contains tumblers in positions 3 through 8.

GLOVE BOX LOCK



25. The glove box door is pictured.



26. The glove box lock is integrated into the handle pull. To remove the cylinder plug you must remove the six screws that hold the glove box door outside and inside sections together.

KEYING KIT



28. The keying kit from Strattec (formerly Briggs & Stratton).



medeco[®]
HIGH SECURITY LOCKS

**The market leader
in locking systems for security,
safety, and control.**

[Click here for more information](#)

MAKING FIRST KEY

Method #1:

Call Pontiac Roadside for the key code.

Method #2:

Use EEZ-Reader to determine cuts in positions 9 and 10 from the trunk lock.

Method #3:

Disassemble the glove box lock to get cuts in positions 7 through 10. Progression cuts 5 & 6 in the door. Progression cuts 3 & 4 in the trunk lock. Then progression cuts 1 & 2 in the ignition for a complete key.

Method #4:

Disassemble the door cylinder to get cuts 5 through 10. Progression cuts 3 & 4 in the trunk lock. Then progression cuts 1 & 2 in the ignition for a complete key.

Method #5:

Remove shroud from around the steering column and pull the retainer on the ignition cylinder to remove the cylinder. Read code stamped on cylinder. It may be necessary to replace the cylinder, depending on the retainer spring.

Code Series: AA00-7N 45

Key Blank:

Ilco: P1107-B86/ B89

Silca: GM 39

Jet: B86-NP

HPC 1200CM #: CF215

M.A.C.S.: 2

Center of first cut: 1.034 (from tip)

Cut to Cut: .092

Depths: 1=.315, 2=.290, 3=.265, 4=.240

FRAMON:

Lay tip stop clip flat against left side of vise, then tip stop key against clip.

Set first cut at: .216

TRM



National Auto Lock Service, Inc. offers a wide range of equipment and services for the Automotive Locksmith. From tools and hard to find key blanks to transponder programming, we can take the mystery out of car service. We accept credit card orders, and can ship COD. Contact us for the latest in automotive technology.

www.laserkey.com



**A Monthly Review of
Technical Manuals**

Steve Young's Quick Entry Car Opening Manual

STEVE YOUNG'S QUICK ENTRY CAR OPENING MANUAL

Produced by Tech-Train Productions



Steve Young's Quick Entry Car Opening Manual is a very comprehensive guide to car openings. The manual is unique in several different ways:

- It contains no advertising.
- It has a special introductory section designed to teach the basics of car opening to the beginner.
- It includes drawings, with dimensions, of each tool so that you can use it with tools you already have or with homemade tools.

The manual is in an 8-1/2" x 5-1/2" page format and presented in a three-ring spiral bound binder for easy update expandability. There is over 400 pages of information which is categorized by section such as: Index, Introduction, USA vehicles, European vehicles and Asian vehicles. An introduction of the various locking linkages as well as explanations and drawings of the various tools needed to defeat such linkages is also included.

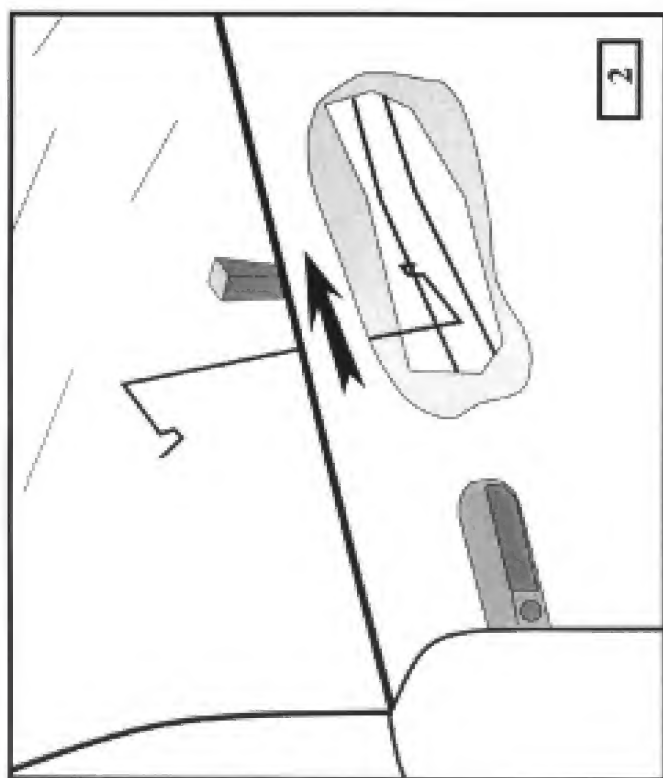
The Quick Entry Manual features clear and concise line drawings of each car door to show you where the linkages

and guards are located. There is also a step-by-step explanation of how to open each car, along with the direction of plug rotation if you want to pick the door lock. Alternate methods are also included for hundreds of vehicles so you are not limited to one method or tool. Warnings are printed in bold print to alert you to potential problems with particular vehicles.

Each opening procedure presented in the book can also be seen in close-up detail in the Tech-Train Productions car opening series of videos. This is one of the few - if not only - car opening manuals that is also supported with a series of video tapes that shows in great detail the actual opening of every vehicle presented.

Steve Young's Quick Entry Car Opening Manual is available directly from Tech-Train and selected distributors. The suggested list price of the manual is \$79.95 and is updated on an annual basis for a nominal fee.

For more information contact Tech-Train Productions at (800) 356-0136, or visit them on the Internet at www.techtrainproductions.com.



VEHICLE: CHRYSLER SEBRING
WEDGES: YES
LIGHT: YES
TOOL: TT-1003
DIRECTION OF TURN: COUNTER CLOCKWISE

The inside horizontal linkage rods can be easily seen near the center of the door. The inside lock control rod is the upper of the two rods at this point.

Begin by wedging open the window near the center door. Insert an inspection light and locate the upper horizontal linkage rod. This rod connects the inside lock control to the door latch.

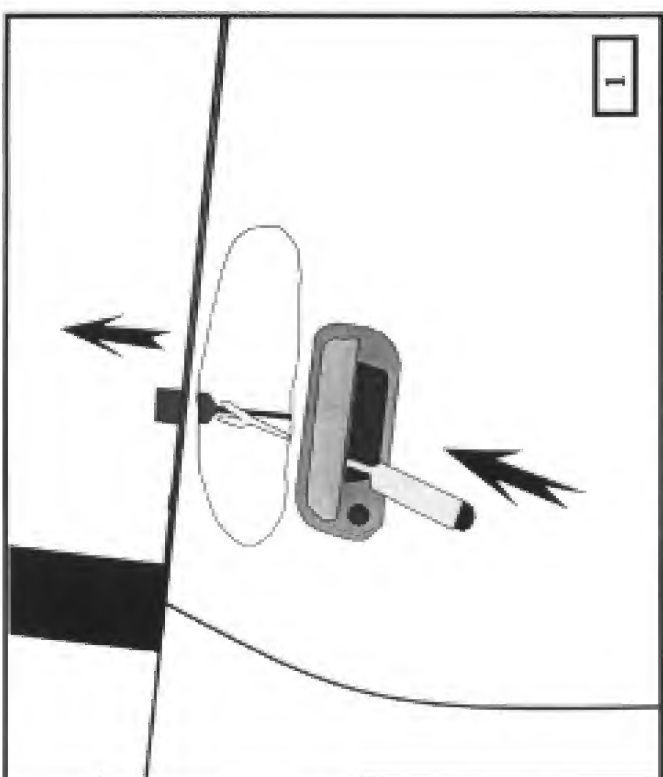
Insert the long end of the tool into the door and hook onto the upper horizontal linkage rod. Twist the tool to lock onto the linkage rod. Lever the linkage rod toward the front of the car to unlock it.

NOTE: The two horizontal linkage rods inside the door cross as they approach the rear of the door. If you wedge the door open too far to the rear, you will have to attack the lock control linkage at a point where it will be below the inside handle linkage rod. The rod is much harder to reach at this point, but can be operated with the tool if necessary.

NOTE: Inside the door, this vehicle is identical to the Dodge Avenger, but is available as a hardtop or as a convertible. The hardtop models are equipped with Mitsubishi locks and the convertible models are equipped with Chrysler locks.

COPYRIGHT © 1997
STEVEN E. YOUNG

Page: USA 121



VEHICLE: FORD EXPEDITION & LINCOLN NAVIGATOR, 97 and up
WEDGES: YES
LIGHT: NO
TOOL: TT-1016
DIRECTION OF TURN: COUNTER CLOCKWISE

These vehicles are equipped with vertical lock control linkages. The linkage rod can be attacked with the TT-1016 "Fondue Fork" tool through the rear opening under the outside door handle.

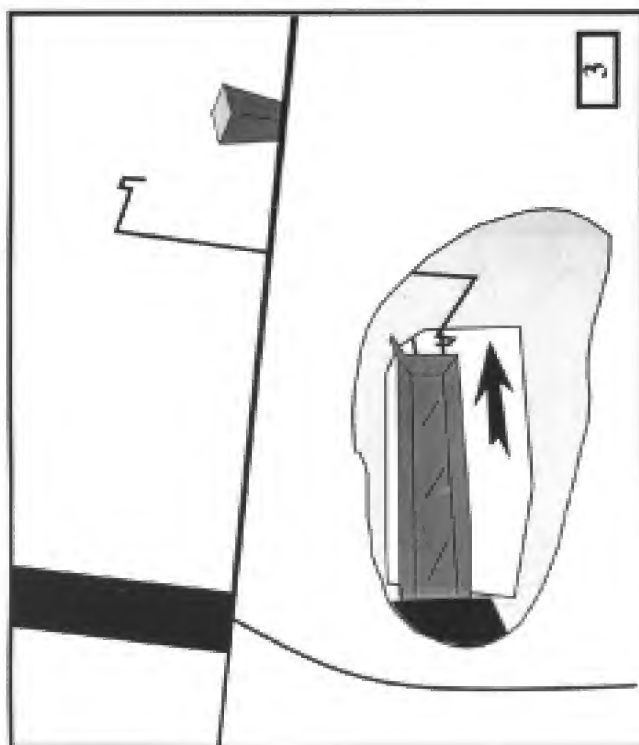
Begin by lifting the outside door handle and locating the two openings beneath the handle. Insert the tool into the opening toward the rear of the handle, then lower the handle. Hook the end of the tool onto the vertical linkage rod by feel, while watching the inside lock button for movement. Once the tool has contacted the linkage, slide the tool upward along the linkage rod until it contacts the lock button. Pushing up on the lock button from below will unlock the truck.

NOTE: The outside handle MUST be pushed down as far as possible in order for the door to be unlocked.

ALTERNATE METHODS: These vehicles can also be unlocked with the TT-1007 tool, using the procedure on page USA 1, or with the TT-1017 tool. However, it is the opinion of the author that the TT-1016 tool is by far the easiest method.

COPYRIGHT © 1997
STEVEN E. YOUNG

Page: USA 132



VEHICLE: HONDA CIVIC (2-door & 3-door coupe only), 95 and up
WEDGES: YES
LIGHT: YES
TOOL: TT-1008
DIRECTION OF TURN: COUNTER CLOCKWISE

The inside lock control linkage on this car is the lower of two horizontal linkage rods inside the door. Both rods are very well shielded by a rigid black plastic guard. The only point where the linkage can be attacked is at a small gap between the forward edge of the plastic guard and the inner skin of the door.

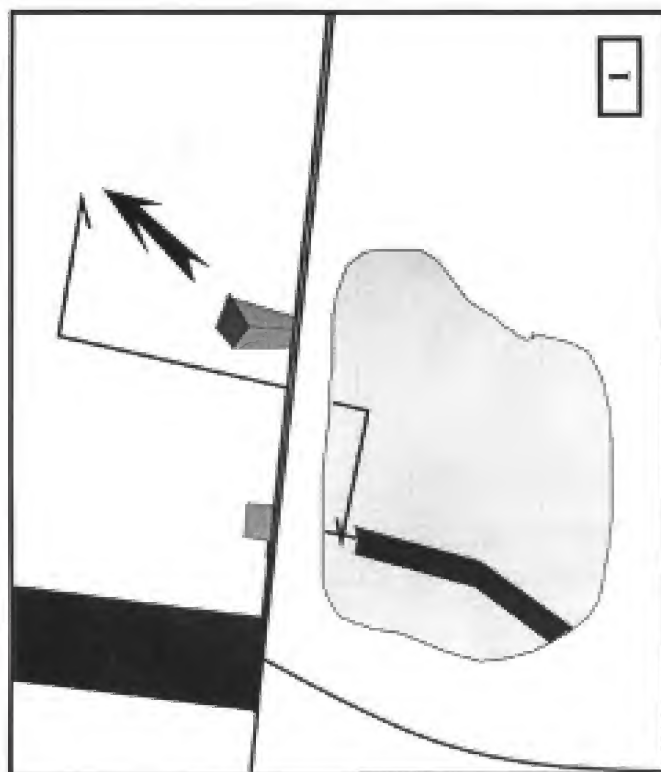
Begin by wedging open the window above the forward edge of the outside door handle. Insert an inspection light into the door and locate the forward edge of the black plastic guard. Insert the long end of the tool into the door, with a slight inward bend in the shaft of the tool. Lower the tool until it is below the forward edge of the guard, then rotate the tip of the tool below the guard. Pull up on the tool so that the tip of the tool slides upward between the forward edge of the guard and the inner skin of the door. The tool will stop when it is hooked onto the inside lock control linkage rod. Twist the tool to lock onto the linkage, then lever the linkage rod forward to unlock the car.

NOTE: As you probe for the linkage, watch the inside lock operator for movement. If the tool fails to contact the linkage rod, or hooks onto the handle linkage rod, try bending the shaft of the tool so that the tip of the tool reaches further into the door and repeat the above procedure.

NOTE: The two and four door models are very different inside the door. For the four-door Civics, see page ASIA 145.

COPYRIGHT © 1995
STEVEN E. YOUNG

Page: ASIA 144



VEHICLE: HONDA CR-V
WEDGES: YES
LIGHT: NO
TOOL: TT-1017
DIRECTION OF TURN: COUNTER CLOCKWISE

This vehicle is equipped with vertical lock linkage rods connected to lock buttons near the rear of the front door. The lower portion of the rod is shielded by a soft plastic tube, but the upper portion of the rod is unguarded.

To unlock the truck, begin by wedging open the window near the inside lock control button. Carefully insert the tool so that the hooked end can grip the linkage rod from the outboard side of the door. As you insert the tool, be certain to lower the hooked end of the tool until the shaft is against the window weatherstrip before rotating the tool. Hook the tool around the upper portion of the vertical linkage rod by feel, while watching the button for movement.

Once the tool is hooked onto the linkage rod, pull the tool toward the front of the truck to bind the linkage, then pull upward to unlock the door.

CAUTION: Use care while inserting and removing the tool from the door. Turning the handle of the tool can break the window glass if the hooked end of the tool is wedged against the glass, or if the end of the tool has become hooked onto the lower edge of the glass.

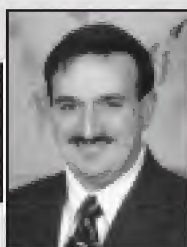
ALTERNATE METHOD: This vehicle can also be unlocked with the TT-1010 tool. See page ASIA 1 for more information.

COPYRIGHT © 1997
STEVEN E. YOUNG

Page: ASIA 171

Access Control

PART 1



by
**Steve
Gebbia**

with

SECURITRON

Ask five locksmiths what comes to mind when they think of electromagnetic locks and you'll probably get five different answers. One will tell you about holding strength measured in the thousands of pounds. Another will talk about silent operation. A third will talk about seamless integration into access control and alarm systems. The fourth would be only too happy to tell you about how much money he makes installing them. The last locksmith? He took off running at the thought of working with electricity.

There is another response, though. Many times, it is incorporated into the system as an afterthought. What is it? The personal safety of your customer's employees. Often we get so caught up in how strong a lock is or how well it controls traffic that we can forget it has other, important uses.

Here, then, is a system that came about because of this need for personal protection.

Designing The System

The main purpose of this system is to allow employees to secure the door remotely when faced with a possible threat. The customer also requested that the system provide additional security at night. Of course, employees would need to be able to enter freely regardless of the lock's condition. Free egress would be required at all times as well. To

accomplish this, the following components are required:

- An electromagnetic lock
- A means of free egress
- An auxiliary push-button
- An electronic timer
- A keypad or other access control device

Selecting The Components

There are several manufacturers that produce high-quality electromagnetic locks and associated components. Any of these could accomplish the goals for this system. Securitron products were chosen for this job primarily because of their Touch-Sense Bar (see Photograph 1). This stationary bar provides immediate and free egress for electromagnetic locks. It works so well that when adjusted properly, you literally cannot tell that the door is locked.



1. Securitron products were chosen for this job primarily because of their Touch-Sense Bar.

Securitron products can, of course, be combined with those of other makers. At times, this may be required to obtain the features needed for your system. But you must beware - some products may not work as well with components of other manufacturers.

Another consideration is warranty. Not using recommended components may void the warranty. And if there is a problem with a particular component in a "mixed manufacturer" system, you may have trouble obtaining warranty coverage.

The Site

The business in which we will install this access control system is located in a small industrial park. You probably have similar buildings in your town. Each building contains several suites. There is an office space in the front and warehouse space in the rear. This is not a high crime area, but the easy access makes it a prime target for trouble.

Like many small businesses, one person is often the only one there. In this case, every day at lunch time the receptionist is there by herself. And quite regularly, someone is working late and alone. The customer wanted a way for the receptionist - or any other employee - to quickly lock the front door remotely.

The door in question is fairly typical. It's a 3' x 7' narrow stile aluminum and glass storefront door



2. The door is fairly typical. It's a 3' x 7' narrow stile aluminum and glass storefront door.

(see Photograph 2). The side lites and top lite complete the aluminum and

glass storefront. The office space has a suspended ceiling. Most of the ceiling is nine feet high. The area near the front door is a full twelve feet high. The door frame extends to above this section of the ceiling. All in all, there is plenty of access for running wires.

Wiring It All Up

As a system gets more complicated, so does the wiring. This is particularly true when incorporating several release devices. Securitron makes it easy for you, however. Simply fax them a list of components along with a description of how you'd like the system to operate, and they will fax you a wiring diagram customized for your system. Before you fax them anything, call them and discuss your system with a technician first.

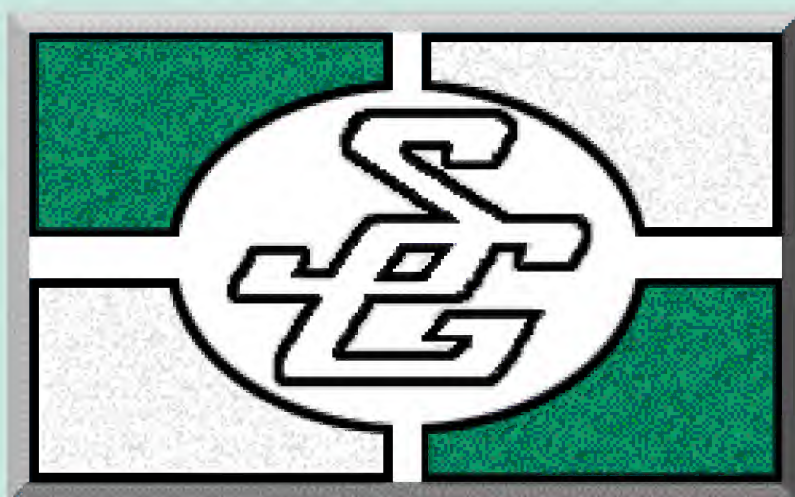
Before physically installing the various components, determine where you will run your wires. As you install each product, you will need to provide wiring access. This must be allowed for as you proceed with the installation.

The Magnalock

At the heart of the system is a Securitron Magnalock (see Photograph 3). I used the model 32 which has 600 pounds of holding force. This may not seem like much, but in many cases, this is still stronger than the door and frame. This is often the best choice for glass doors because it's small enough that the armature mounting bolt usually does not interfere with the glass. This, of course, should be verified for your application prior to locating any holes.



3. At the heart of the system is a Securitron Magnalock.



**Make Sargent & Greenleaf's
Comptronic locks your choice for
electronic safe locking solutions.**

[Click here for more information](#)



4. An option that will lessen the visual impact of the Magnalock is the Dress Cover.



6. Securitron offers a number of power supplies.

Since the vertical portion of the frame is often stronger than the horizontal header, the Magnalock may also be mounted vertically. For applications that require maximum holding strength, consider the model 62 or 82. Model 62 has 1200 pounds holding force, while the 82 has a whopping 1800 pounds holding force.

A variety of adapter plates is available to provide you with the proper mounting surface. Examine your door and frame carefully. An option that will lessen the visual impact of the Magnalock is the Dress Cover (see Photograph 4). It allows the device to blend into the frame and really completes the installation.

The Magnalock 32 Installation

The Magnalock requires one 2-conductor wire run to provide power to it. Getting it to the lock can be fun. In most cases, there is no opening between the horizontal frame header and the vertical portion of an aluminum frame. You must find a way to bring the wires from the header to the vertical frame members. You have a couple of options.

The first is to bring the wire out of the top of the header and into the



5. After the wire holes and wire for the Magnalock is run, it's a simple matter of bolting the Magnalock to the header and Strike plate to the door.



7. Power is provided by Securitron's BPS-12-1 power supply and optional backup battery.



After the wire holes and wire for the Magnalock is run, it's a simple matter of bolting the Magnalock to the header and Strike plate to the door (see Photograph 5).

Power Supply

Securitron offers a number of power supplies (see Photograph 6). For this job, Securitron's BPS-12-1 power supply and optional backup battery was chosen (see Photograph 7). This 12 volt, 1 amp power supply has an integral charging circuit to keep your battery charged. In the event of an AC power failure, the battery will drive your load. How long it does so will depend on the draw of your system's components and the battery selected.

A really nice feature of the BPS series is an indicator light mounted to the door of the power supply cabinet. This light is readily visible with the door closed and indicates that DC power is being supplied to your system.

The Auxiliary Button

A PB-4A push-button wall switch located near the receptionist desk was installed to allow the receptionist control over the system with the push of a button. It toggles the system to the locked position (see Photograph 8). There are several ways to wire this



8. A Securitron PB-4A push-button wall switch located near the receptionist desk toggles the system to the locked position.



9. The wall board must be cut at the desired switch location. Wires are then run through the wall to the switch box and the switch is then installed with two screws.

switch depending on what you want it to do. In this instance, the switch creates an "and" condition. This means that for the system to be unlocked, the electronic timer AND this switch must both be in the unlocked position.

The PB-4A Auxiliary Button Installation

The Securitron model PB-4A push-button wall switch may be wired several different ways depending on your system requirements. One option would be to wire it as a 3-way in conjunction with the timer. This would allow either the timer or the switch to lock or unlock the door. However, doing so will allow anyone with access to the PB-4 the ability to unlock the door. This may cause a security breach.

Another option would be for the wall switch to use a momentary contact switch wired to trip the timer relay. This would be the same effect as pressing the timer's "test" button. Again, anyone with access to the switch could leave the door unlocked.

For this system, a third option was selected. During the daytime (unlocked mode), the button will toggle the Maglock to the secure position. In the evening (locked mode), pressing the button does not unlock the door. The PB-4A does not affect timer operation. This does create a special situation.

Thursday is a holiday. At 3:00 on Wednesday, the boss decides to be nice and let everyone leave early. To secure the door, the PB-4A is pressed. The door is now secure. The following morning, the timer will read the "unlock" command and execute it. However, since the button was pressed, the

door is still secure - the auxiliary button is still holding the lock in the secure position. In this case, this is actually desired.

The following day, however, is another story. On Friday, the timer executes the "unlock" command - but the door does not unlock - the PB-4A is still holding it secure. To unlock the door, the button must be pressed one more time.

Each of these wiring methods has its advantages and disadvantages. It is your job to determine which will be best suited to your customer's needs. Once you decide how you want this switch to function, the wall board must be cut at the desired switch location. Wires are then run through the wall to the switch box and the switch is then installed with two screws (see Photograph 9).

Next month we conclude this installation with the Timer, Touch-Sense Bar and DK-26 Keypad. Until then, don't get your wires crossed. **TNL**



*It's not safe
unless it's
Schwab Safe.*

[Click here for more information](#)

Locksmiths & Distributors

"Forging a stronger alliance through communication"

Last year we interviewed a number of locksmiths to find out how the locksmith distributor relationship is perceived from the locksmiths' point of view. What we found was that most locksmiths have strong feelings about their suppliers. They mentioned many instances where distributors had helped them in their businesses, and also cases which caused them to be angry with wholesalers.

We decided to take a closer and more specific look at the locksmith-wholesaler relationship in this article. We interviewed Stan Maziuk, Jr., President of Maziuk & Co., Inc., a Syracuse, NY-based distributor. We also spoke with Andy Maglio, owner of Action Lock & Key in Roselle, IL.

Both of these individuals had plenty to say about the state of the relationship between supplier and locksmith. Perhaps by understanding each other's problems, we can forge a stronger alliance to the benefit of all.

Stan Maziuk
President, Maziuk & Co. Inc.



Stan Maziuk

TNL: How does a locksmith benefit by dealing with a distributor?

Maziuk: They are willing to provide technical expertise, business expertise, solutions, and suggestions for problems. It is likely that if you call a single manufacturer, you will get a single solution.

TNL: Distributors complain that locksmiths don't buy as much as they used to. Locksmiths say they can't because distributors sell direct to

their customers. Is there truth in these statements?

Maziuk: It is true that certain business has changed, especially when an end user hires in house locksmiths. But, the other thing to consider is that there are power retailers and even hardware store type accounts that are looking for more commercial type business. I know that in my community even the True Value hardware store is selling more and more commercial type hardware to end users.

I get bids in the mail all the time from all kinds of places that need ten thousand or fifteen thousand locks. In many cases I'll never be able to compete on these because the manufacturer will sell the locks on a direct basis. As a distributor, I don't like it at all that I have to miss the opportunity to bid on ten thousand locks, but that is the reality of the market. Things are very competitive.

Even with those challenges, there is still plenty of business for a locksmith who has a trusting relationship with a supplier committed to multi-step distribution.

TNL: Orders not being filled accurately or completely is a common locksmith complaint. Do you believe things are getting better or worse?

Maziuk: Inaccurate orders are never correct or justified. Many locksmiths are completely justified when becoming frustrated in these situations. When you have wholesale distributors stocking tens of thousands of items, it is my guess that mistakes will happen. Although that is not an excuse for a pattern of mistakes. I do feel that the industry as a whole has improved

because the locksmith has demanded that the distributor improve their order accuracy.

TNL: At times there is a fairly significant price discrepancy on the same item between distributors, especially on large ticket items. What is the cause for that?

Maziuk: I think it is a combination of things. On the one hand if you were to shop around for a lawn mower you would no doubt come up with a lot of price discrepancies. On the one hand you may be looking at some wholesalers to whom extensive volume and buying power will dictate a better discount. You may also be looking at the wholesalers that concentrate on some lines more than others and who have expertise or deeper commitment to some lines rather than others.

The other thing that you have always had — but more so in the last couple of years — are the low price kings who have shown up for no other reason than the desire to buy market share. In the short term they may have been good for the locksmith because of lower prices, but in the long run I don't think it's healthy for the industry in general.

TNL: Calls for help are common in this industry. Should a distributor be expected to provide technical support to its customers?

Maziuk: I think it is a reasonable expectation that a wholesaler selling a product should be able to provide answers in some fashion about that product, whether they are technical or application questions. I think that is part of the reason for the wholesale

Continued on page 48

Continued from page 46

distributor to exist. It may come in the form of on staff personnel that can give in depth answers to application questions. It may also come in the form of financing knowledge or knowing how to get a hold of some so called "tech service wizards."

My personal philosophy is that we are both in a business where we don't just sell something and that's the end of it. Distributors and locksmiths have an on-going relationship with each other in that just like the locksmith has to be there after the sale, the distributor also has to be there after the sale.

TNL: How has the role of a distributor changed over the years?

Maziuk: There has been a lot of talk about added value over the last couple years. I think there is truth to that when you consider that distributors also offer expertise, business knowledge, and other technology that some locksmiths are taking advantage of.

I see our role as providing other things besides just product itself. The expectations put on the distributor have been changing. We are definitely being compelled to ship product more quickly, are working harder on

preventing inaccuracies and are carrying accounts receivable in some cases. We are also certainly being asked to operate on a lower profit margin than a few years ago. There is no question that the distributor's profit margin in general is lower because of the ever increasing number of choices offered to them.

TNL: What is your biggest complaint when it comes to dealing with locksmiths?

Maziuk: I get frustrated when we are asked to be there for technical advice and bail individuals out of jams, then the help is forgotten when a flyer comes in the mail from someone else offering a dollar lower on an item. Maybe that is an unfair generalization because there are also a lot of business people, and a lot of locksmiths out there, that are not driven by that.

TNL: Do you think the average consumer's loyalty is less than what it once was?

Maziuk: Yes.

TNL: Do you think this is because there are so many more choices out there that it makes it much more difficult to be loyal to any one given source?

Maziuk: Yes. All of sudden there is a larger number of choices that the consumer is confronted with, making it tougher for some people to be as loyal. I think that even with all the choices we have today, it makes sense to concentrate on, and make yourself valuable, to a few sources instead of spreading yourself too thin.

TNL: What is the key to a good distributor locksmith marriage?

Maziuk: Relationship development. I think that is the key to good business success. I think this is the most important factor we have discussed.

TNL: What can a locksmith do to improve this?

Maziuk: Talk openly with your supplier. Get to know some of the key decision makers within your supplier's company. Make sure that you can be heard. The locksmith needs to demonstrate to the distributor what he can do. He must show that he can be a good business person. Show your supplier what you can do for them, and any smart supplier will reward you for it.



SRI and Steve Young are working together to bring you the best in locksmith tools and supplies.

[Click here for more information](#)

Andy Maglio
Owner, Action Lock & Key, Inc.



Andy Maglio

TNL: Do you think locksmiths will ever get to that point where they can ban together and buy as a group?

Maglio: No, I don't see the locksmiths ever grouping together because they just can't get along with each other. It would be a smart business decision, but no, I don't see it happening. Do you know how many locksmiths can't even talk to each other because they think they are competing with one another? If locksmiths really and truly could get together to share their knowledge instead of their war stories, the profession as a whole would be a lot better off.

TNL: Is there a problem with distributors selling direct?

Maglio: Yes, a number of distributors sell direct whether they will admit to it or not. In some way or another they always have some kind

of loophole that will allow them to sell to the customer directly.

To be very truthful this is just causing them to hurt themselves. It's going to take a manufacturer willing to eliminate the middle man and sell direct to make them understand. The manufacturer can ship it out UPS next day air and have it to the locksmith the same way any one else could. Orders may get messed up, but if the company can turn around and sell me product for 45 percent off of the list price it's worth it.

When you eliminate the distributor, the manufacturer is making more money and the locksmith is saving money. You can't tell me that once those dollar signs start going others won't follow suit. The only chance the distributor has to survive will be by focusing on the service aspect.

TNL: What do you think that manufacturers selling direct will do to the two step distributorship as we now know it, and what do you think distributors will do to offset this?

Maglio: I think this will cut back on the number of distributors and I don't know how they will offset it. What I am afraid of is the possible loss

of distributors that can offer you a large number of products in one place. I shoot most of my business at these distributors because I like the one stop shopping. I think your odd ball stuff will still be supplied by distributors, but the rest will be sold by the manufacturer. That is where they will try to make their quick dollar.

Distributors need to keep up with the times because things are constantly changing. The distributor that does will be a smart distributor.

TNL: Do you find that your orders are filled accurately and completely?

Maglio: That is an unfair question for me because I expect my distributors to straighten out their problems. If I order a part from their catalog and get the wrong part because they put the wrong numbers in the catalog, then they need to fix the mistake. If on the other hand one of my guys orders aluminum door closers when the customer wanted brown, that's our fault.

Everybody needs to fess up and eat their own mistakes. Fair play is the way to go.



STRATTEC™

It's your reputation.

Trust the original.

[Click here for more information](#)

TNL: Do you feel that there is a large price discrepancy between distributors?

Maglio: Yes, but it's creative accounting. Distributors have different discount structures they offer the locksmith. One may give you 40 percent off and another 50 percent off of their created price. You are actually only getting 40 percent because they have just marked it up 10 percent.

You have to be smart and go out there and find the bottom line cost because there is a big difference in price fluctuation. I had to price a Detex 230 and I came up with 4 different distributors and 22 dollars difference in price.

TNL: What level of expertise and technical support do you expect from your distributor?

Maglio: I expect from my distributor the same thing that my customers expect out of me, which is knowledge of the products that they sell. I don't necessarily expect it directly, but I do expect them to have the capability to look into it or direct me to where I can find information. I do the same thing when I have

customers coming in to ask me about certain products. I have the avenues to explore it. That is what I expect from my distributor. Get me the answer or direct me to where I can get the answer.

TNL: Can you share any particular instance that stands out in your mind where the distributor went way beyond the call of duty to satisfy you, or to get you out of a jam?

Maglio: Most of the distributors that I have chosen to deal with have one or two key personnel who have definitely gone way beyond the call of duty. This is why I use them. They have a history behind them of knowing old and new product and they can direct me on what to use for the scenario that I am facing.

There are some distributors who will bring the manufacturers representative to your place to show new product. Knowledge is the key. I have had distributors call me and ask me questions. This is living proof that they will go out of their way to help others

TNL: What changes have you seen over the years between distributors and their practices and services?

Maglio: The strong ones have been aggressive in improving their services. They have been offering more things and staying on top of things. I have also noticed that many of them are slacking off. They start out offering you one thing, but then regroup midstream and come up with something else.

TNL: What do you think distributors in general can do to better or further their relationships with locksmiths?

Maglio: Communicate, and stay in touch. I can tell you from the locksmith point of view that it is the customer that you think you can do no wrong to that is actually the one you need to take extra care of. If you don't, then one day they will walk to someone that will give them that extra care. This is a fact because it is how I got most of my customers. I was available when people needed me. Good service and follow-up phone calls would help distributors a lot. **TNL**



**ASP - Your Auto Service
Center for the World**

[Click here for more information](#)

Diebold Diebold

double trouble



1. Heavy Diebold Fire Safe with large bubble dial and handle located directly below dial (VD).

Sa f e
Cracking
is a long
arduous task,
fraught with many
pitfalls and
problems, but
safecracking is
FUN. I look
forward to a good
contest between
man and machine. The particular safe
(patient) I will cover this month offered
me a good challenge times two.



by Dale W.
Libby, CMS

I often tell customers that call me for a safe opening challenge, that they can save some money if they bring their safe to me. Most times, this challenge is not accepted, but occasionally they actually DO bring the safe to my garage for opening. The particular safe in question was a clearly labeled Diebold fire safe with a



2. StrongArm Pro kit puller in "Slam-Hammer" mode.



3. StrongArm Pro Kit "Threaded Bolt" puller.



4. Old Style Mini Rig with "Unch-a-Magic" washer.



5. Normal operating of Mini Rig. No gap between chuck and collar whilst drilling is in progress.

"B" Underwriters label. This safe, as can be seen in *Photograph 1*, has the traditional large 'bubble' dial with the handle located directly below (VD). If this safe was a newer vintage, I might suspect a Vertical Down (VD) location of the lock, but the distance between dial center and handle is too close to allow this newer (GPC) configuration.

Having worked on these safes before, I knew in fact that the lock is mounted Horizontal Left (HL). The handle cam operates a lever arrangement. A stud on a locking bar

is below the combination lock bolt, and when the bolt is out in the locked position, it blocks the upward movement of the bolt carrying bar, and thus keeps the safe locked. This will be clearly shown later after the unit is open. This Diebold safe is the same as many York safes of the same early 40's era. Both safes can use the oversized bubble dial. On this particular safe, however, there was two problems that I pointed out to the customer right off the bat. First, the dial had been melted off the spindle by the previous safe technician and then pounded back on the safe door, without the dial ring. I state that because a new dial, ring, and lock would have to be installed.

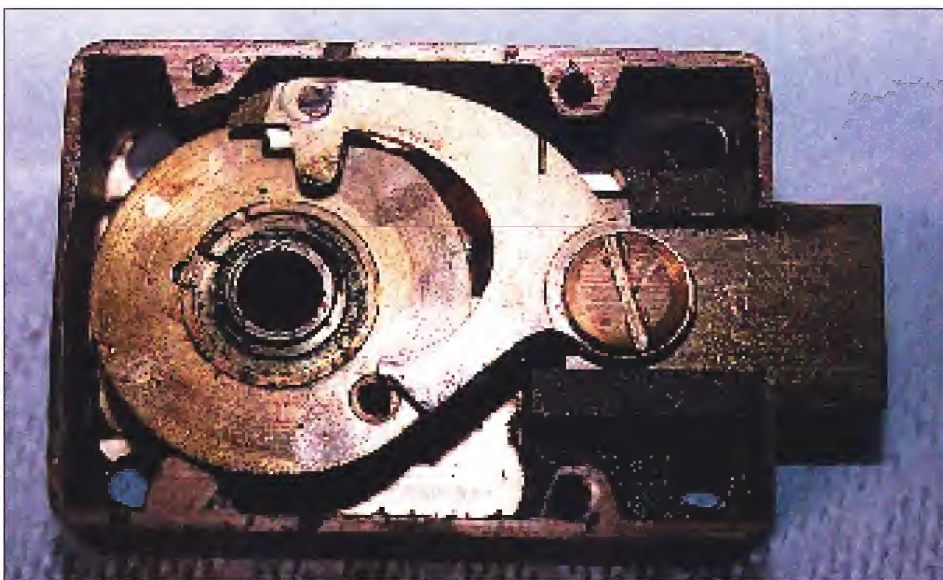
The second problem was that the safe was too heavy. Trying to move this unit was very hard, even with the wheels on the safe. The unit was bottom heavy, and I told the customer that there was a high probability that there was another safe or money chest installed in the bottom of the unit. I explained that if the inner safe or chest was locked, there would be an additional charge to open the second safe. Of course there was, and of course there was a second charge. The customer agreed, eventually.

Opening

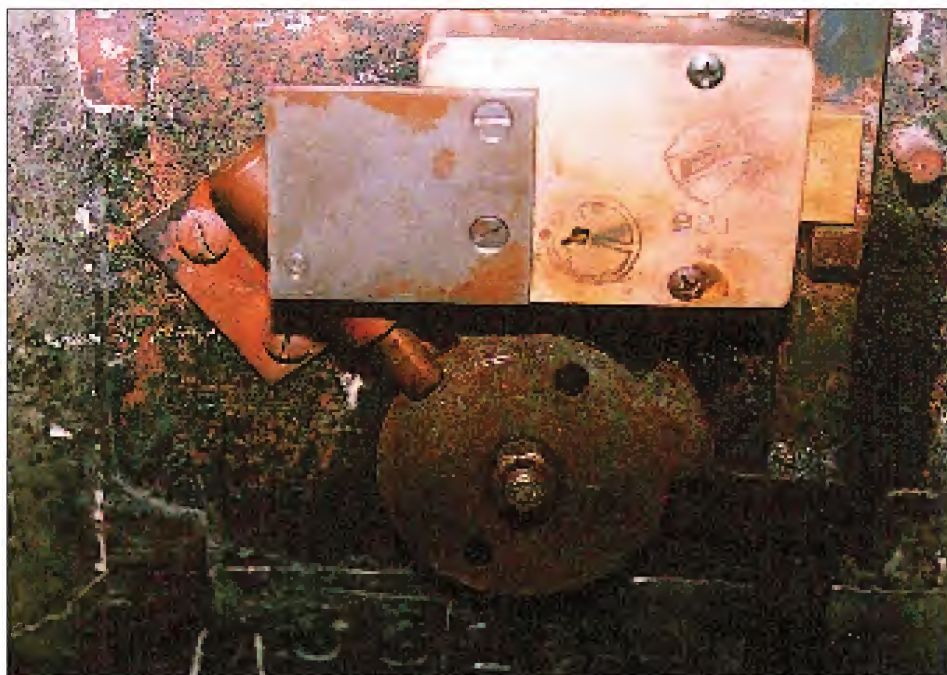
StrongArm has come out with a new drilling kit called the StrongArm Pro Series Mini Drill Rig. I will use the dial puller from the Pro Series Mini Rig to show how the dial removal task is easily accomplished. *Photograph 2*, shows the 'slam-



6. After drill breaks through lock case, it "Unches" forward 1/8 inch cleaning out hole and NOT scarring wheel pack or end of fence. 1/8" Gap can be seen between chuck and collar.



7. Diebold 900 lock at ZERO change position. Edge of change key will hit lever adjacent to change key hole (shown here) and raise lever above gates whilst changing combinations.



8. Standard lock, bolt, and relock configuration on many Diebold fire safes. Lock is mounted (LH) Left Horizontal. Relocking device will block handle rotation when activated.

hammer' type puller that is still very popular. The puller cup is attached to the safe dial with 4 hardened set screws. The bolt and weight is then screwed into the hole in the top of the

cup, and the dial is gently pulled off the spindle.

There is another way to pull this dial without any damage to the combination lock that slamming might

cause. Instead of slamming the dial off, a tapered threaded bolt is screwed into the puller cup (see Photograph 3). Before attaching the puller cup to the dial, the end of the dial (top) must be drilled to expose the end of the dial spindle at the center of the dial. This is accomplished with a 5/16 inch drill and a pair of pliers. Once the hole is drilled, attach the cup, again with the 4 set screws, and turn the dial off the spindle by using a wrench. Either technique will pull the dial readily.

Now we are ready to attack the safe. First, I tried to attach a dial to the spindle to try and manipulate the safe open. I could NOT get satisfactory readings, so it was time to drill.

The lock used on this safe felt like the traditional Diebold 900 series Group II type combination lock. This is a "zero" change lock which means that the combination is set to the opening index. There is no changing index on the dial ring. (In this outer safe, there was no dial ring to begin with.)

The drop in for the 900 is approximately 99, as opposed to the traditional drop in area of 97 for S&G combination locks. The StrongArm

Continued on page 58



**We have it all.
Quality, Value,
& Service.**

[Click here for more information](#)



**The Innovation You
Expect, with the
Flexibility You Need!**

[Click here for more information](#)

Continued from page 55

drill rig template for an S&G lock will work just fine for the Diebold 900. *Photograph 4*, shows the 'old' StrongArm drill rig with the "Unch-a-Magic" washer. I point this out only for conversation.

The retaining washer on the end of my rig became loose and allowed the inner shaft of the drill assembly to move about 1/8 inch in and out. As a result the rig worked perfectly with an added bonus. *Photograph 5*, shows the collar and drill chuck drilling thorough hardplate in the normal fashion.

Photograph 6, shows what happens when the drill went through the lock case or encountered air when drilling. It would "Unch" ahead slightly and clean out the hole incredibly well. It never went far enough to either scar the edge of the wheels or to damage the end of the fence or lever. It was the diabolical penetration indicator that I was 'into' something. I have since replaced the washer and the slack, but now that I think about it, I may change it back again!

After drilling the hole through one layer of hardplate, and entering the lock case at 97 with a 1/4 inch drill, I was able to see the end of the lever fence. It was child's play to line up the gates in the wheels under the fence and open the door.

Photograph 7, shows the Diebold 900 Series zero change lock. I set the wheels in the position that would allow the change key to be inserted. When the key is fully inserted in the combination lock and turned, the 'flag' on the key interacts with the edge of the lever adjacent to the change key hole. This raises the lever above the wheels and will not let the fence to fall into the aligned gates in the wheels.

This is the action on all zero change locks. The combination is set to the opening index with the gates aligned under the fence. There must be some mechanism present to keep the lever and fence from dropping into the wheel pack. There is no internal relocker on this lock, more or less. *Photograph 8*, shows the safe in the locked position. The relock retaining plate with an inserted pin is attached to the back cover of the combination lock. This is secured by two screws and prevents the relocker from activating unless the back cover is removed or punched in.

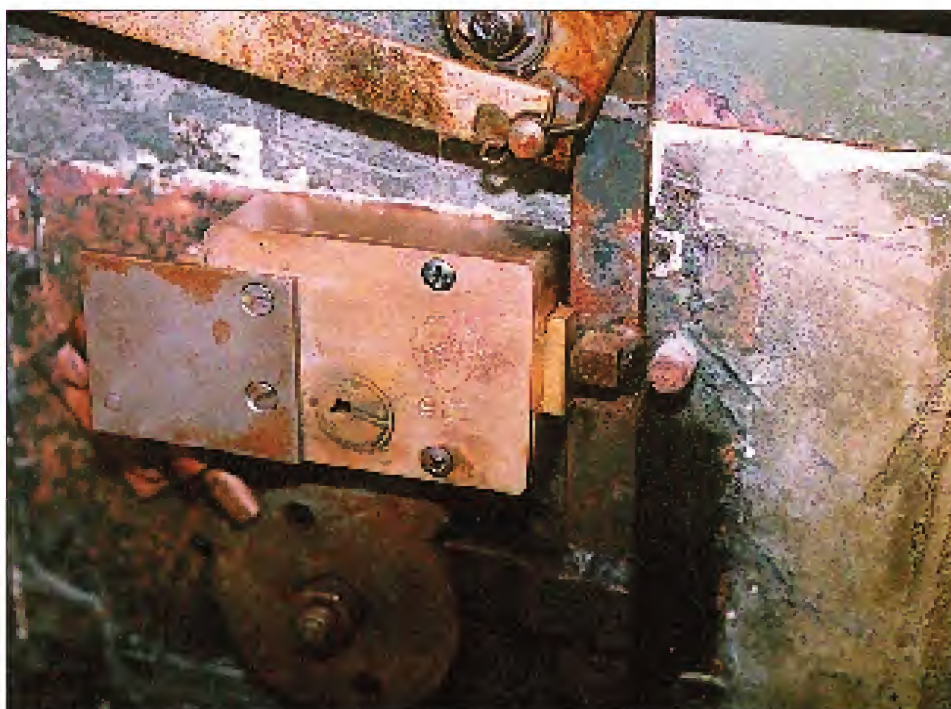
When the bolt of the lock is

retracted, it allows the locking stud on the vertical bar to move upwards when the handle is turned (see *Photograph 9*). It also allows the relock bar protrusion to pass through the bottom of the relock pin. On this safe, the relock pin is slotted and straddles the large bolt cam. This allows for a perfect relocking position when the relock is set off.

In *Photograph 10*, the relock bolt is

set off by staging the back cover being punched. Once the relock is set off, there are several options for defeating the relocker. Most require at least one or two large holes to be drilled. The relock pin is not locked into position, so it can be either pried off or, better yet, drilled into oblivion. Hardplate will be encountered.

Not to my surprise, when the outer door is thrown open, we see the round



9. Door in open position. Note stud on bar has moved past end of the combination lock bolt and slot on handle cam has moved under the relock (and through slot) in relock bolt.



10. A clear shot of relock activation. Pin in cover extension holds spring loaded relock pin into place when NOT activated.

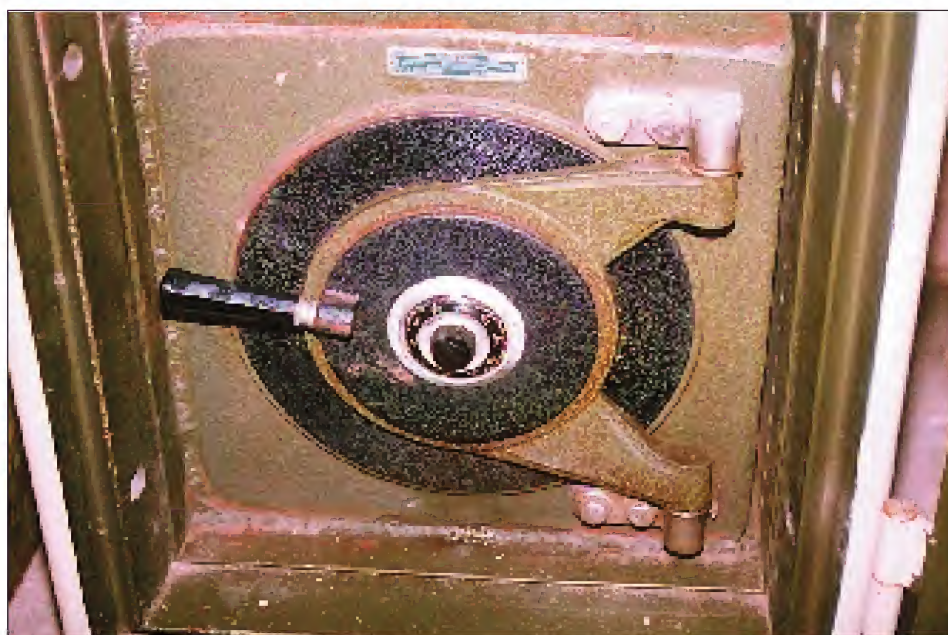
door Diebold money chest installed in the bottom of the safe waiting to be attacked (see Photograph 11).

The inner door uses the same lock as the outer door, the Diebold 900. There are a few modifications to the bolt, but that will not change the opening procedures.

I actually dialed this unit open in about 30 minutes by trying the even zero numbers and the 5 numbers first. You would be surprised at how fast manipulation can be using this simple click, click, open procedure. If I had to drill, I would have pulled the dial and installed the mini-rig again and drilled for 97-99 and moved the wheel gates under the fence.

Photograph 12, shows the back side of the round door. On this door, the active bolt is at the 9:00 o'clock position, and a relock bolt is located directly opposite, at the 3:00 o'clock position, as referenced to the front of the safe door. Whoever worked on this unit previously chose to remove the relock bolt and spring assembly.

What is shown in this picture, that you can barely see, is a pin in the back of the large round cover in line with the bolt hole. To set this



11. Inner round door of enclosed Money Chest. Uses the same Diebold 900 lock as the outer door uses with a few minor modifications.

relocker off, one would have to punch the lock, the combination lock back cover, and the large round back cover to the safe door. This would be a nasty relocker to deactivate. I am just putting this information in for future reference.

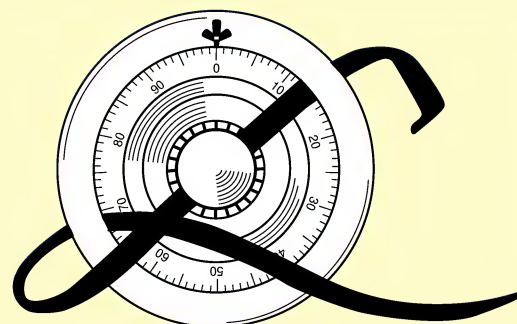
Last but not least, we see a photograph of the inside of the round

door chest, showing the 900 Diebold lock and the rounded end of the lock bolt (see Photograph 13). Into the modified bolt is a threaded hole for a screw that attaches the door round bolt to the lock bolt. In, the lock is in the open position. Note the location of the lever.



HPC, Inc.
Designing Excellence
and Manufacturing
Quality since 1956

[Click here for more information](#)



Lockmasters has a
44 year history of
training security
professionals.

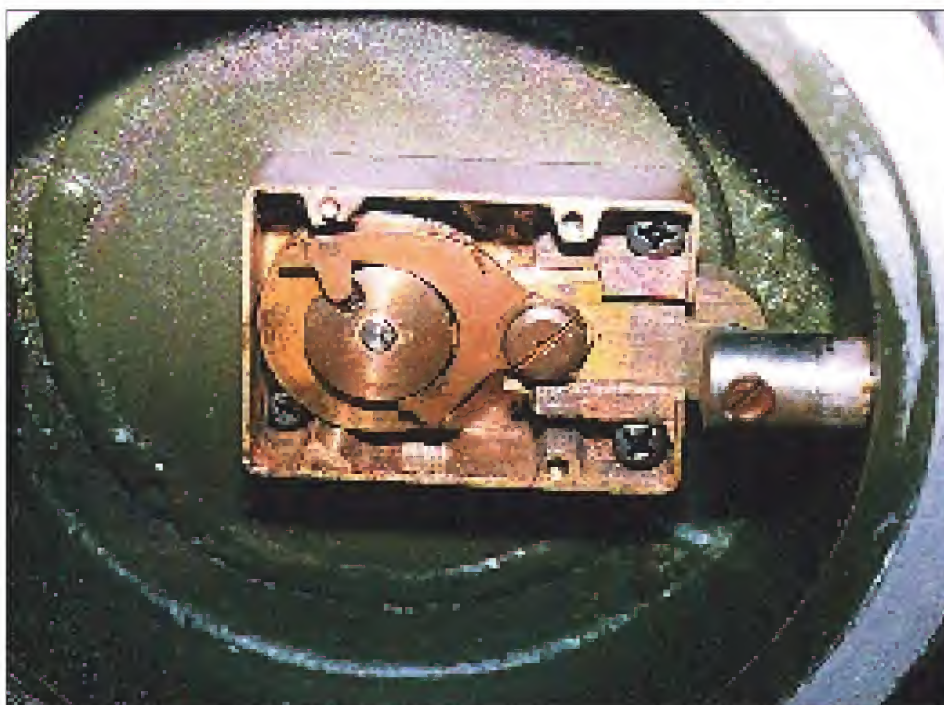
[Click here for more information](#)



12. Active bolt at 9:00 o'clock, and the missing relock bolt is shown here at the 3:00 o'clock position. Pin on large cover holds this bolt into place. Relock bolt was missing at time of opening.

In conclusion, do not be surprised if you occasionally find a safe within a safe. Try and learn manipulation. It is a viable tool to be used by the safe technician. It will also let you diagnose many problems with a safe before you start working on it.

Next, if you do not have a fixed drill rig, and are just using a lever rig, many easy openings are being missed. A fixed rig will allow for precise pin-point drilling. I have made mistakes using a lever rig by drilling too far, and too fast into a safe lock. This will cause wheel



13. The slightly modified bolt is shown here in the open position. The end is rounded with an attached pin to move single active locking bolt. Bolt fits into cavity on edge of door.

damage. The fixed rig lets you drill slower, more precisely, and less damage will be done to the safe lock and your self-esteem. In fact, however, both fixed and lever type drill rigs are required to

open safes and chests. Personal preferences and specific situations will tell you what you should use and what is easiest. OPEN & PROSPER! **TTI**

Major
MANUFACTURING, INC.

Installation Tools
The Professionals Choice

[Click here for more information](#)

The Simplex 7002

by Jim Langston



1. The 7002 deadbolt is compact, stylish and secure.

Simplex mechanical push-button locks are by far the most widely used mechanical keyless lock to have withstood the test of time. The Simplex 7002 deadbolt is one of the newer additions to this broad line of mechanical keyless locks and just may be the cream of the crop (see Photograph 1).

The 7002 deadbolt is compact, stylish and secure. The 7002 provides convenient auxiliary lock protection



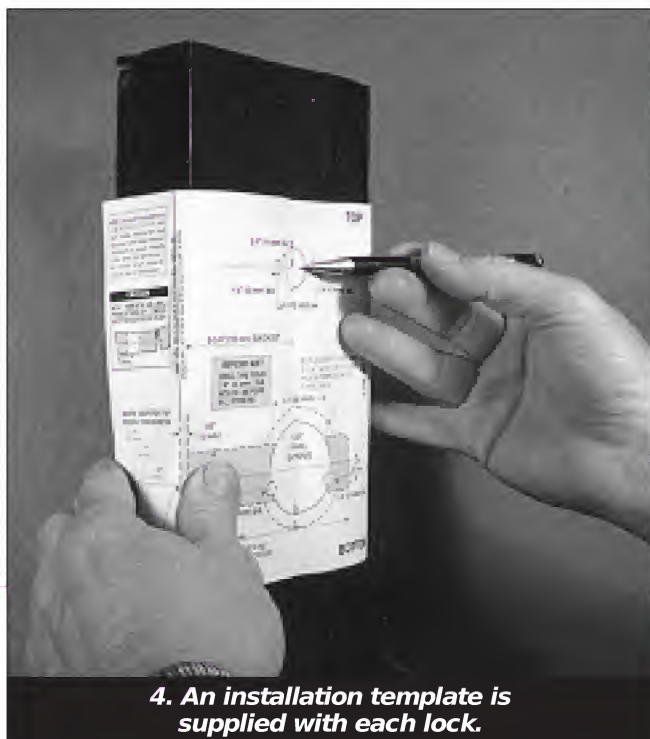
2. The basic components of the lock is the combination housing with thumb turn, deadbolt, inside thumb-turn assembly, inside combination turn assembly, strike, cover plate and mounting screws.

3. This lock uses the same type of combination locking chamber that is used in the 1000 series and the 900 series.

for residential and commercial applications. It can be mounted above an existing lockset or can be used alone.

The 7002 features a 1" tubular deadbolt with a saw resistant hardened steel insert. It is constructed with a cast housing and all metal components and is designed to be installed on doors with a thickness of 1-3/8" to 2-1/4" and a backset of 2-3/8" or 2-3/4".





4. An installation template is supplied with each lock.

The combination on this lock is very easy to change and would be very handy for people who might want to give a guest the combination during their stay and change it once they have left. It is a very fine deadbolt and in my opinion, one of the better keyless deadbolts on the market.

The basic components of the lock is the combination housing with thumb turn, deadbolt, inside thumb-turn assembly, inside combination turn assembly, strike, cover plate and mounting screws (see Photograph 2).

If installing the 7002 in an existing deadbolt hole, the cover plate supplied mounts under the combination lock housing to conceal the hole.



5. What the door will look like after the holes are drilled when installing over an existing deadbolt hole.

medeco
HIGH SECURITY LOCKS

***The market leader
in locking systems
for security, safety,
and control.***

[Click here for more information](#)

As shown in *Photograph 3*, this lock uses the same type of combination locking chamber that is used in the 1000 series and the 900 series.

An installation template is supplied with each lock allowing for easy measuring and installation (see *Photograph 4*).

Photograph 5, shows what the door

will look like after the holes are drilled when installing over an existing deadbolt hole. The hole above the 2-1/8" deadbolt hole is for the combination changing feature of the lock. The two quarter inch holes on either side are for the mounting screws.

Once the mounting holes are drilled, first install the deadbolt as seen in *Photograph 6*.

Since we are installing this lock over an existing deadbolt hole, we must use the cover plate included. *Photograph 7*, shows the cover plate being installed on the back of the lock.

With the cover plate installed, the unit is then mounted on the door, adjusting the combination and deadbolt tailpieces for proper door thickness. The tailpieces are serrated so they may be broken at the length you need and discard the rest. With that complete, secure the unit to the door with the thumb-turn and combination turn assembly screws (see *Photograph 8*).

The completed installation is shown in *Photograph 9*.

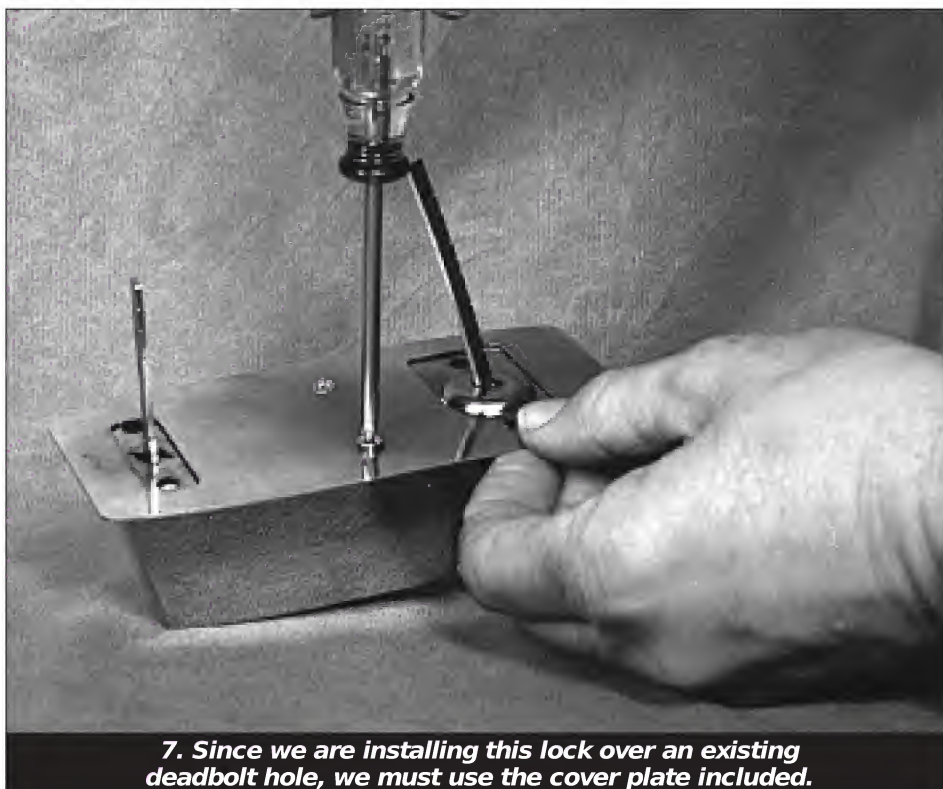
The factory set combination code on this lock is 2 and 4 pressed simultaneously, followed by 3. This code should be changed as soon as the lock is installed. Combination changing procedures follows. It is very

important that the following steps be performed while the door is opened:

- 1.** Turn the outside thumb-turn counterclockwise to clear any random entries from the mechanism.
- 2.** Enter the existing code.
- 3.** Insert a Phillips head screwdriver into combination change sleeve (see *Photograph 10*). Gently turn the sleeve clockwise approx. 1/8" (3mm). A slight click should be felt. Do not force.
Important: When removing the screwdriver, the central piece must return to its initial position, if not, set it back to its original position using the screwdriver, see step 8 — "Verifying the Combination Change Assembly".
- 4.** Turn outside thumb-turn counterclockwise, until it stops, once only, to clear the existing code from the mechanism and release.
- 5.** Select a new code and write it down. (Some or all of the buttons may be used for your new code, pressed individually or simultaneously).
- Note:** A button may be used only once.
- 6.** With the door open, enter the new code. (Depress each button fully and release).



6. Once the mounting holes are drilled, first install the deadbolt.



7. Since we are installing this lock over an existing deadbolt hole, we must use the cover plate included.



8. Secure the unit to the door with the thumb-turn and combination turn assembly screws.

7. Turn the outside thumb-turn clockwise to the stop position. The bolt should retract. Try to turn the thumb-turn clockwise. The thumb-turn will not turn unless the correct combination is entered. If it does not turn and retract the bolt, see step 9 below.

Note: Excessive force will result in slipping the thumb-turn 180 degrees. The slipping mechanism, or force-proof clutch, protects the lock's internal mechanism from forced entry.

8. Press in any wrong combination. Turn the thumb-turn counterclockwise. This should clear the previous combination. Press in the correct new combination. Turn the thumb-turn clockwise. The thumb-turn should rotate. The bolt will be retracted flush with the face plate. The correct combination must be entered each time you want to unlock the door.

9. If, without pressing in the combination, you can retract the bolt by turning the outside thumb-turn to the right, it means you did not follow the instructions properly and

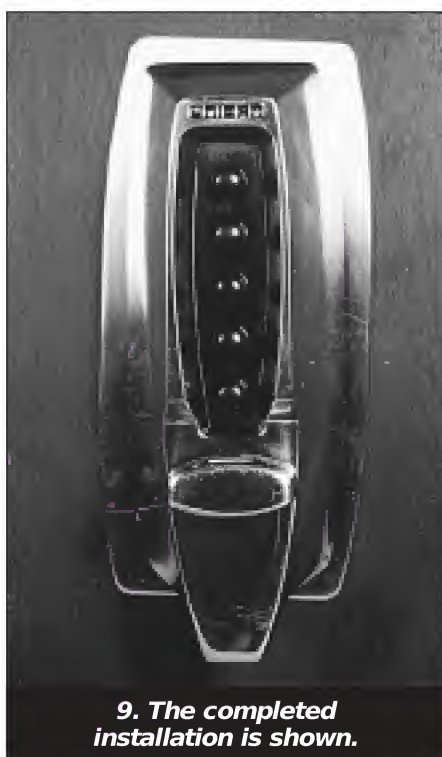
therefore no combination was entered. In this case you must repeat steps 1 to 7, but omit step 2, as the lock does not have a combination.

This is a great lock that I'm sure will become one of the, if not the most widely requested locks in the whole Simplex product line. It is sure to add beauty as well as security to any door.

For more information on Simplex locks call: (910) 725-1331 in USA or (514) 735-5411 Internationally.

Point to Ponder: Good security is like a new car, you get what you pay for.

TRL



9. The completed installation is shown.



10. Change sleeve being rotated during combination changing procedure.

NATIONAL

AUTO LOCK SERVICE, INC.

National Auto Lock Service, Inc. offers a wide range of equipment and services for the Automotive Locksmith. From tools and hard to find key blanks to transponder programming, we can take the mystery out of car service. We accept credit card orders, and can ship COD. Contact us for the latest in automotive technology.

www.laserkey.com

BEGINNER'S CORNER

Chicago Double Bitted Locks



by
**Jim
Langston**

This month's article is on Chicago Double Bitted locks. These locks have proven to be rather difficult to service and rekey. The design of the Chicago Double Bitted lock is vastly different than a standard tumbler lock. The operation and principal is the same, design and construction is just different.

I will be covering a way in which you can make a key for this Chicago lock which is one of the most difficult to do. I will also cover how to rekey these unusual little critters.

Chicago Double Bitted cam locks come in a variety of sizes. Backsets are measured from the inside of the face cap to the end of the lock. They come in 7/8", 5/8", 13/16", 1 1/16", 1-3/16", and 1-1/2 inches. The diameter of the face of the lock comes in two sizes, 1 inch, and 7/8 inch. The double bitted switch lock comes in three backsets, 1-1/2 inches, 1-9/16, and 1-13/16 (see Photograph 1).

The first thing you need to rekey this lock is a Chicago Lock keying kit designed specifically for the double bitted lock (see Photograph 2). The second thing you need is to know about is the different key blanks and how they work.

The double bitted lock is available in seven different keyways which consist of four basic key blank designs (see Photograph 3). If you are holding the key blanks with the groove up and the tip pointing away from you, you will note, as in Photograph 3, the first key blank on the left is a center groove broaching. The second key blank is an off center right groove broaching and the third key blank is an off center left groove broaching. The last blank is a "W" key blank.

Key blank number K-2 and K-4 are center groove broachings of slightly different dimensions. Key blank number K-4-L is off center left, keyblank K-4-R is off center right. The "W" milling is available in three varieties: K-4-W, K-2-W and K-18 (see Illustration A).

To key a lock to an existing key, you will need the tumbler assembly shown above the keys in Photograph 3. These are pre-assembled "0" cut tumblers which consists of 11 tumblers and two retaining blocks, one on either side. There is a sort of Z spring which doubles as a tumbler spring and retainer. The tumbler assemblies are available in all seven broachings.



1. Chicago Double Bitted cam locks come in a variety of sizes and types.

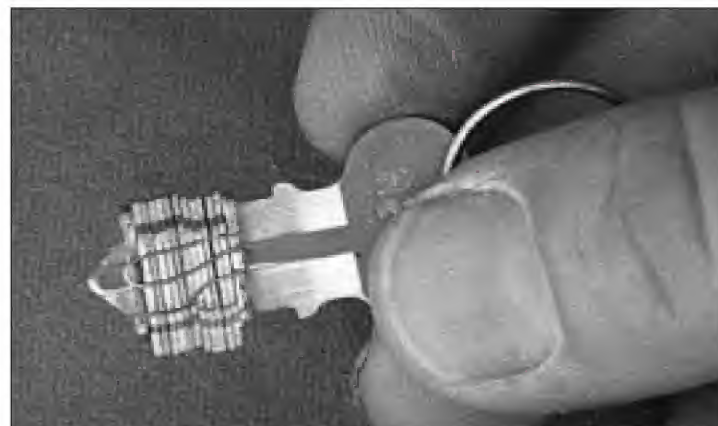


2. A Chicago Lock Double Bitted keying kit designed specifically for the double bitted locks.

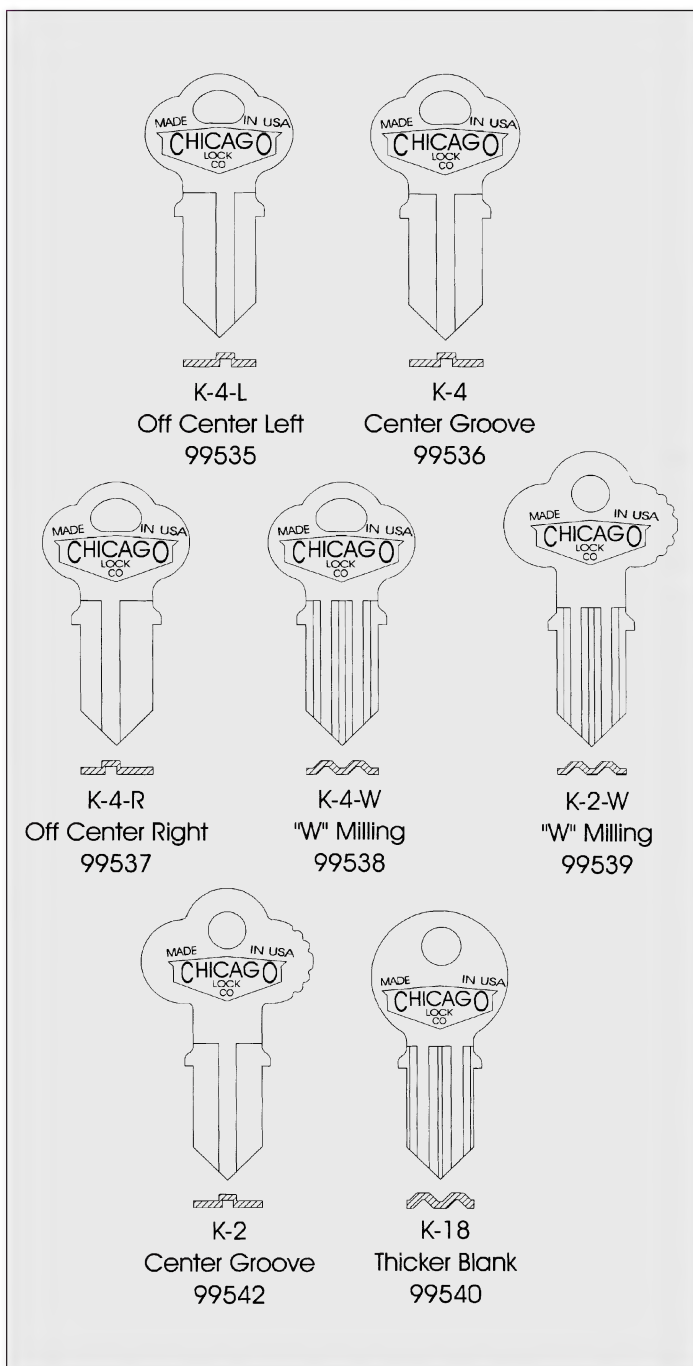
Continued from page 66



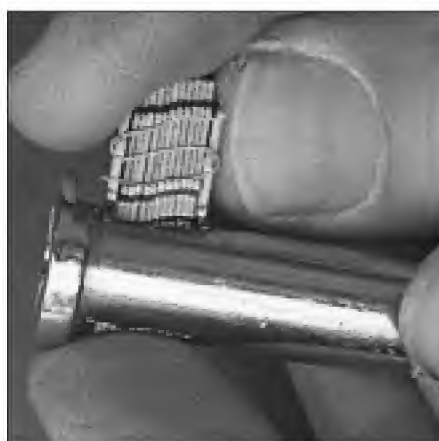
3. The double bitted lock is available in seven different keyways which consist of four basic key blank designs.



4. These "0" cut tumbler assemblies are inserted in the plug when setting an existing customer's key to the lock.



A. A drawing of all the double bitted blanks available for Chicago locks.



5. Tumbler assemblies are staked in the plug so you must knock the old assembly out.



6. After you have the tumbler assembly in the plug, you need to re-stake it.

These "0" cut tumbler assemblies are inserted in the plug when setting an existing customer's key to the lock (see Photograph 4). Tumbler assemblies are staked in the plug so you must knock the old assembly out to put a new tumbler assembly in (see Photograph 5). After you have the tumbler assembly in the plug, you need to re-stake it (see Photograph 6).

Next insert the customer's key into the plug and file the tumblers down on both sides until the tumblers are even with the top of the plug (see Photograph 7). When the key enters the plug easily, debur the tumblers and then reassemble the lock.

If you are originating a key for an existing lock, this can prove to be a difficult and tedious experience. The reason why is, you cannot insert an uncut key blank in the lock and tumbler assembly. The key blank is wider than the throat of the tumblers and must be cut before it can be inserted in the lock.

When looking at a cut key, you will notice

Continued from page 68



7. Next insert the customer's key into the plug and file the tumblers down on both sides.

that if one side of the key blade is high, the direct opposite is low. This wave corresponding cut pattern is required not only for the lock to operate, but for the key to be inserted. This is why this particular lock poses a special problem when generating an existing key without duplication. Therefore, we must find a way to originate a key without the luxury of inserting the key in the plug.

One method to originate a key is to cut two key blanks in half that will be used to raise the tumblers on one side. This method is used to generate the cut pattern of the tumblers. Cut one blank down to the center groove broaching from the shoulder of the key to the tip. Cut the second blank in the same manner on the opposite side (see Photograph 8). These keys will be used to get the configuration of the wafers and will not be used to make the actual key.



8. One method to originate a key is to cut two key blanks in half that will be used to raise the tumblers on one side.

Put one of the cut-away blanks in the plug with the cut side on the bottom. Take note of the configuration of the wafers (see Photograph 9). The configuration of the wafers will be what the key blank cut pattern will look like on the opposite side of the blank. In other words, the tumbler pattern you see in Photograph 9, will not appear on the top side of the blank in the lock, but rather will be the cut pattern on the bottom side of the blank.

Now that you have the cut pattern for one side of the key, insert the other key in the lock. This will give you the cut pattern for the top side (or opposite) side of the key blank.

It is now a matter of filing a key blank to match the cut pattern for both sides. This is a tedious task, but it is one way to originate a key blank (see Photograph 10). Remember, depending on the cut configuration, both sides of the key will need to be cut before the key can be inserted into the tumbler assembly.



10. It is now a matter of filing a key blank to match the cut pattern for both sides.



9. Put one of the cut-away blanks in the plug with the cut side on the bottom. Take note of the configuration of the wafers.



11. Another method used to originate a key is with the use of pre-cut try-out keys.

A method that can be used to facilitate the origination of the key is to trace or photo copy the outline of the tumbler pattern. Then trace the pattern on the key blank and file accordingly.

Pre-Cut Keys

Another method used to originate a key is with the use of pre-cut try-out keys (see Photograph 11). This is by far the easiest way to accomplish this task. There are 402 try-out keys in a set. These keys will work on center cut locks only, and it's a simple matter of trying one key at a time until you find the correct key that will turn the lock. Then duplicate the key on another blank.

Another code method you can use to originate a key using the pre-cut try-out keys, is to simply match the code number to the try-out key number. Just eliminate the "H" prefix and match the numbers.

When using this method, remember that the try-out keys are all center grove broachings. If the lock in which you are originating a key is either an off center left or right broaching, you will need to compensate for the off-set in the positioning of the blank in the vice jaws of your key machine.

If you want to try and cut a key by code, spacing and depth information follows. These keys are not the easiest to cut by code because there are nine depths with a drop increment of .012, and eleven spaces with a cut to cut spacing of .028. Good luck.

Cuts start at: .237

Spacing: .237, .265, .294, .322, .350, .378, .407, .435, .463, .492, .520

Depths: 0 - .392, 1 - .380, 2 - .368, 3 - .356, 4 - .344, 5 - .332, 6 - .320, 7 - .308, 8 - .296, 9 - .284.

If you would like more information on Chicago Double Bitted locks, contact:

Chicago Lock Company
10100 88th Ave.
Pleasant Prairie, WI 53158
Phone: (414) 947-7177
Fax: (414) 947-7178

Point to Ponder:

Time is what keeps everything from happening all at once.

TNL



Make Sargent &
Greenleaf's
Comptronic Locks
your choice for
electronic safe
locking solutions.

[Click here for more information](#)

1997 Technitips Year-End Prize Winners

*Congratulations to all
the winners and thanks
to all who entered!*

**GRAND
PRIZE:
SILCA
BRAVO
DUPLICATOR**



Tom Tusing of Florida

For his tip on generating Mercedes keys.
(May, 1997)

**FOURTH
PRIZE:
\$500 IN
ASP
AUTO
LOCKS**



Leo Kouliogiannes of Tennessee

For his tip on making a template to mount a
Yale 112. (Mar. 1997)

**FIFTH
PRIZE:
SECURITRON
DK-26
TOUCHPAD
AND CPU
BOARD FOR
MAGNETIC
LOCK**



John M. George of California

For his tip on speeding up the picking of
tubular locks. (July 1997)

**SIXTH
PRIZE:
SDC
MAGNETIC
LOCK,
KEYPAD
AND EXIT
SWITCH**



Ben Skeen of West Virginia

For his tip on opening and repairing
Atrium Locks. (Aug. 1997)

**FIRST
PRIZE:
HPC'S
1200
PUNCH
MACHINE**



Dennis Harmon of Colorado

For his tip on rotary screwdrivers. (June, 1997)

**SEVENTH
PRIZE:
ARROW
EXIT
DEVICE AND
MOUNTING
PLATE KIT**



Don Spenard Jr. of Washington

For his tip on repairing Yale panic
hardware dog downs. (Oct. 1997)

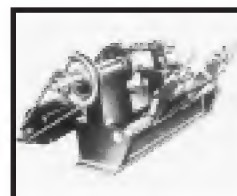
**SECOND
PRIZE:
CURTIS
2100
DUPLICATOR**



Greg Fasse, CRL of Missouri

For his tip on generating keys for GM's
10-cut ignition. (Jan. 1997)

**EIGHTH
PRIZE:
FOLEY-
BELSAW
200 KEY
MACHINE**



Peter P. Shifferli of New York

For his tip on rekeying Master/Dexter "Universal Pin"
locks with a follower and screw driver. (Nov. 1997)

**THIRD
PRIZE:
\$500 IN
ALL
LOCK
PRODUCTS**



John Bertonneau of California

For his tip on making a great portable work
station from a brief case. (Feb. 1997)

**NINTH
PRIZE:
SLIDE
LOCK'S
GRAND
MASTER
"Z" TOOL
SET**



Michael Zurawski of Wisconsin

For his tip on making a "Snorkel Protector" for
2 oz. spray cans of WD-40. (Sept. 1997)

**TENTH
PRIZE:
DEWALT
CORDLESS
DRILL**



Lawrence Lewis of Delaware

For his tip on making an emergency GM 10-cut key that would open the doors but not turn the ignition. (Dec. 1997)

**SIXTEENTH
PRIZE:
ABUS
PADLOCK'S
MARINE
PADLOCK
DISPLAY**



Jim Loftus of Virginia

For his tip on business promotion. (June 1997)

**ELEVENTH
PRIZE:
FALLS PICK
SET FROM
MARK
BATES
ASSOCIATES**



James Lee Roy, III of Louisiana

For his tip on placing a blind code on Master Padlocks. (Aug. 1997)

**SEVENTEENTH
PRIZE:
BAXTER
J V-1 and
J V-5 CODE
BOOKS**



R.J. Bent of New York

For his tip on temporarily securing panic devices. (Nov. 1997)

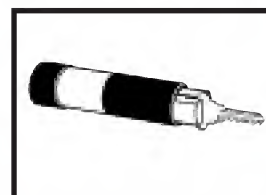
**TWELFTH
PRIZE:
SARGENT
AND GREEN
LEAF 6120
ELECTRONIC
SAFE LOCK**



Chuck Frazer of California

For his tip on "drilling" out a spline key on a Yale OC-5. (May 1997)

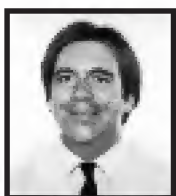
**EIGHTEENTH
PRIZE:
FRAMON
IMPRES-
SIONING
HANDLE**



Shane Maloney, CMS of Canada

For his tip on modifying furniture locks for more security. (Feb. 1997)

**THIRTEENTH
PRIZE:
MAJOR
MANUFAC-
TURING'S
HIT-111
DRILL GUIDE**



Pete Gamble of North Carolina

For his tip installing a Simplex 1000 on a 2-1/8" thick door. (Jan. 1997)

**NINETEENTH
PRIZE:
ESP
PRODUCTS
SAMPLER
FROM ESP**



Mick Lindemann, CRL of Minnesota

For his tip on defeating a bent ignition wafer. (Sept. 1997)

**FOURTEENTH
PRIZE:
SIEVEKING
PRODUCTS
SQUEEZE
PLAY**



Jeffrey Hula of Virginia

For his tip on using an under-the-window tool to open a Camry. (Mar. 1997)

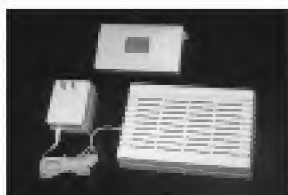
**TWENTIETH
PRIZE:
SIEVEKING
SAFE
DEPOSIT
BOOK**



Barry Metzner of New York

For his tip on removing "break-away" bolts on ignitions. (Jan. 1997)

**FIFTEENTH
PRIZE:
RODAN'S AV
TX200,
RX200,
INDOOR
WIRELESS
TRANSMITTER
AND
RECEIVER**



John Starrett of Canada

For his tip on reducing combo changing info onto cards which are "ringed" to the appropriate change key. (Sept. 1997)





**ALL LOCK KWIKIT
WINNER:
Portable Pinning**

Here's a tool for anyone that has ever spilled a pinning kit! The tool consists of a base and what I call "Pin Sticks" consisting of a row of six pin compartments which are covered and secured with a wing nut (see Photograph 1).

One feature of the Pin Sticks is that they can be attached to the base, used individually, or stacked for special uses. Pin Sticks usage can be as varied as your imagination will take you.

Note that each "cup" has a cap on it which consists of a brass key tag, and a wing nut and bolt to prevent spillage when the stick is not in use. If you look closely, you will see that each Pin Stick has a magnetic strip epoxied to its side. This strip will hold tail-pieces, non-brass springs, assorted screws, retaining clips and miscellaneous hardware.

Dennis Harmon
Colorado



Photograph 1.

[Editor's Note: Dennis sent me a set of Pin Sticks and I think they are a great tool for anyone that does more than a little repinning. I also think that for those of you who do not want to take the time to "make your own", you'll likely find it on the market in the near future.]



**AERO LOCK TRY-OUT
KEY SET WINNER:
Quick Ignition
Removal**

I recently worked on a 1991 Pontiac LeMans with a broken B-61 key in the ignition. After unsuccessful attempts to remove the broken piece with my spiral extractors, I found a quick way to remove the lock and then the key.

First remove the shroud and the plastic facing around the lock. After doing so you will find there is ample room to shim the lock from the front by using two old picks or some spring steel. Once you have the lock

A Few Words From Jake...

HAPPY NEW YEAR!

I'm willing to bet you that the locksmiths you see listed on the previous pages are having a happy new year! They're the folks that won a great prize in our year-end drawing for the 1997 Technitips contest.

In addition to the fabulous year-end prizes, they also won a prize for the month — or months — that their tips were published. In addition, they received twenty-five Locksmith Bucks, and a tips book. Not a bad deal for sitting down and writing me a letter with a printable tip, is it?

I want to congratulate all of the winners (monthly and yearly alike) for their efforts. I also want to extend a great big thank-you to all the manufacturers and distributors responsible for providing these wonderful gifts, and for not only being a part of the Technitips team, but also being intimately responsible for its success. Your participation and generosity is greatly admired and appreciated by all.

I hope that the dozens of goodies that were given away during the 1997 Technitips contest, made the winners lives a little better, a little happier, and instilled the realization that if you give, you shall receive.

I'll see y'all next month with 1998's bodacious, prize lists. I guarantee it will be bigger, better and more exciting than 1997! Y'all heah me, now?



**by Jake
Jakubowski**

shimmed, turn it to the "ON" position and depress the retainer to remove the lock.

After the lock is removed it is just a matter of removing the broken key.

Daniel Chapana
Ohio



**STRATTEC RACING
JACKET WINNER:
Lock-Out Key**

When a local mall called and wanted a tenant locked-out, the mall manager told me he really didn't want to lose the tenant, he just wanted to shake them up enough to pay their rent. He asked

me to lock them out without rekeying the locks.

I would usually use a Major Manufacturing Keyblock to do the job, but the door was a pair of solid cherry stile & rail doors with a Baldwin Pitcher handle lock mounted on the active door. The Keyblock would not work and a hasp and padlock was completely out of the question.

I used an SC-1 key blank and filed it down as seen in *Illustration A*. I filed enough of the bow back so I would be able to get a pick in to lift the pins when the time came to remove the lockout key.

I attached the key to a key ring and holder and slid a card with a warning on one side and on the other side, I inserted the mall manager's card.

Jim Hess
Pennsylvania

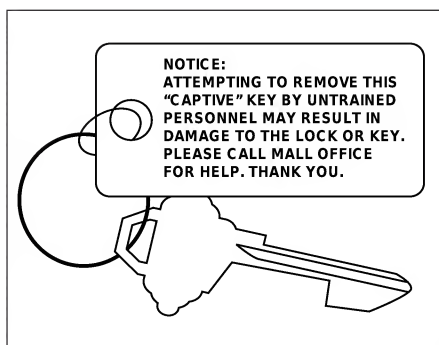


Illustration A.



**HPC PISTOL PICK
WINNER:
Malfunctioning Titan
Removal**

I was called to service a Titan lock that would spin, but not retract the bolt. I suspected a broken tailpiece was the problem.

The first thing I did was use the customer's key to make a "removal" key by filing a slot on the bottom of the blade. Although the plug would pull out slightly, it would not come out of the housing with the removal key.

Continued from page 74

Feeling certain that the tailpiece had separated from the back of the plug, I surmised that the tailpiece retainer had raised just enough to prevent the plug from being removed. After several attempts to dislodge the clip, I decided to drill the cylinder.

Drilling at the shear line, I counted each pin as the drill broke through until I hit a dead spot. I knew the dead spot was the retaining clip.

After hitting the clip with my drill, I used an ice pick and a hammer to dislodge the clip and remove the plug.

William Rydzewski
New York



**SARGENT AND
GREENLEAF WINNER:
Dog Pin Alternative**

The Dogging Unit End Cap on the Adams Rite Exit Device at a local I-HOP restaurant chronically failed every few weeks and would allow the device to lock, preventing customers from entering the restaurant.

After several trips to the restaurant to install a new Dogging Unit, I decided there had to be a better way to solve this problem. There was and it was very easy.

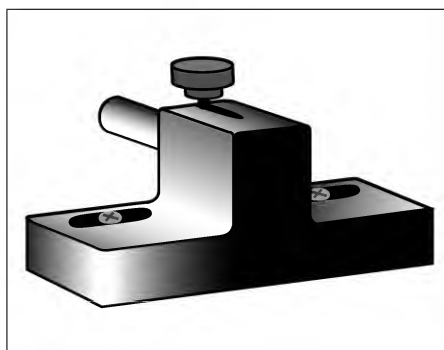


Illustration B.

First, I removed the dogging unit from the original end cap to prevent it from interfering with the exit devices normal operation, should it happen to vibrate loose again. Next, I reinstalled the end cap using a Mitey-Lok Patio Door & Window Lock (see *Illustration B*). I installed it on the door just below the exit device making it centered on the door.

Next I pushed on the panic device while holding it in and marked where the hole needed to be drilled for the bolt of the Mitey-Lok so that it would engage the push bar of the exit device. (Note that I only had to drill the hole for the Mitey-Lok bolt into the push

bar itself without having to enter the Adams Rite's mechanism, which might interfere with its operation.)

Now all the restaurant personnel had to do was depress the push bar and raise the bolt of the Mitey-Lok into the hole in the push bar. No more dogging keys, no more problems! In fact, the manager called me back a few weeks later and had me do the same thing to another device before it failed.

Raymond Reding
California



**A-1 SECURITY
PRODUCTS WINNER:
Keyblank Filing
Cards**

If, like a lot of shops, you have accumulated a lot of odd key blanks that are taking up too much room on your key boards, here's a cheap, fast and easy way to fix the problem.

As you can see in *Illustration C*, I use a 3x5 card filing system to catalog and organize these odd-ball blanks.

Cut out strips of corrugated cardboard from cartons you would throw out. Cut the strips 5" long and 1-3/4" tall. Make sure the ribbing of the cardboard runs vertically (parallel to the long side).

Now push the keys into the corrugations from the top edge of the card, up to the bow. The keys will be held there by the ribbing and you can store three to four keys on a single card.

Write the key information or identification along the top of a regular 3x5 index card and file them away in a file. The keys are available if you need them, and you have freed up valuable space on your key boards for current numbers.

Vince Marier
Maryland

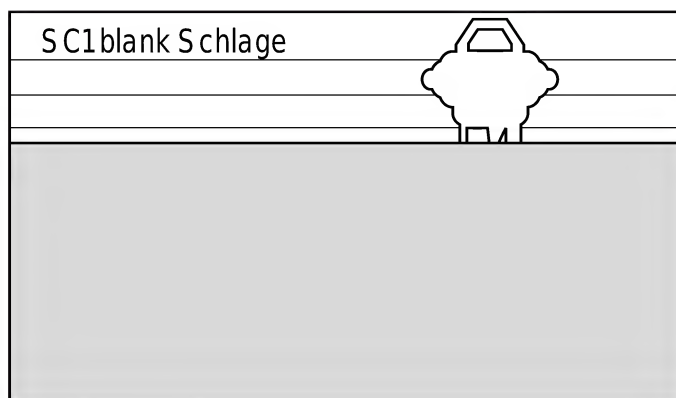


Illustration C.



**SILCA KEY BLANKS
(100) WINNER:
Receivable Receipt
Form**

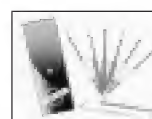
I'm certain everyone has customers sign authorization forms when it is necessary, but what about when you buy something from the customer you are working for?

If a customer tells me they have a safe they want to sell, and I decide I want to buy the safe I have them sign a receipt of my own. I have written up a form which functions as a receipt which the customer signs.

This receipt helps establish that I bought the unit legitimately and that the seller represented themselves as having the right to sell the item. It also helps me to legally establish a cost for the safe to calculate a profit, for tax purposes, when the safe is sold.

Documentation like the above is evidentiary of your good faith and common business sense.

Johnathan Millsap
Texas



**PRO LOCK PK 15
PROFESSIONAL PICK
SET WINNER:
Pre-Prepped
Impressioning
Keys**

I have found a way to make impressioning easier and less frustrating. When impressioning a key to open a pin tumbler lock, the marks left on the key blank indicate spacing and possible depth. I have found that by making a "space" key by cutting each space to its first depth on my code machine takes the guess work out of determining the spacing and lets me concentrate on determining the depth.

By using these pre-prepped "space" keys, I have cut the time it takes me to impression a key nearly in half. Consequently, I now carry a variety of the most popular key blanks with the spacing already marked and ready for impressioning.

Dave Nissen
Minnesota

Continued from page 76



TECH TRAIN TRAINING
VIDEO WINNER:

Saab Jumping

I was called to retrieve the keys that were locked in the trunk of a 1996 Saab 900. To open the trunk, I used a short piece of wire and jumped from fuse 17 to fuse 4 (you can also jump to 5, 6, or 16).

While holding my jumper in place, I depressed the trunk lock button on the door and released the trunk lid.

The fuse box is located on the end of the dash console and can easily be seen when you open the door.

William Allgood
South Carolina



SIEVEKING
PRODUCTS GM E-Z
WHEEL PULLER
WINNER:
Deadbolt Holding

Fixture

Here are simple instructions for making a "third-hand" for holding exterior door hardware in place while interior trim is applied. It consists of a modified bar clamp, with the fixed jaw replaced by a homemade plastic fork or horseshoe.

Use a ten inch Quick-Grip or Craftsman Bar Clamp and remove the

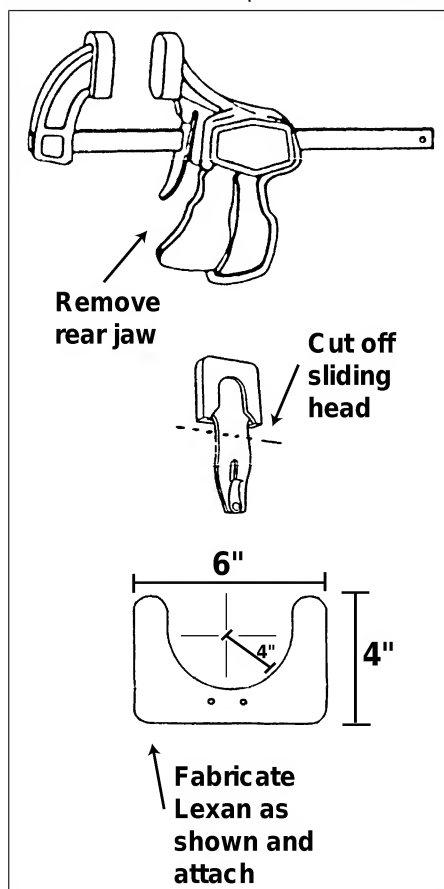


Illustration D.

glass-filled, nylon OEM rear jaw, using a hammer, arbor press or saw to expose the stop-pin hole. Then modify the clamp sliding head by cutting off the upper portion (see Illustration D). You have to use an abrasive cut-off wheel in a rotary tool as these are made of hardened steel.

Next, fabricate the new open-back rear jaw from a piece of 1/4" x 4" x 6" Lexan polycarbonate as shown in the illustration and attach it to the modified sliding head with two flat head machine screws and nuts.

This unique tool can now be used to hold deadbolt exteriors, rim cylinders or other items in place while the inside cylinder, thumb-turn or other trim is attached.

Peter P. Shifferli
New York

Major
MANUFACTURING, INC. MAJOR
MANUFACTURING PRODUCTS
WINNER:

Master Cylinder Vent Tool

I found that a bail off a master cylinder from an older car makes a perfect tool to open front window vents. One end will work the drivers side, and the other end will work the passenger side.

Simply work it under the vent, like any other tool, and you can pull in the button and at the same time pull open the lock lever.

Marvin Golden,
Oklahoma



SLIDE LOCK'S "Z"
TOOL OPENING SET
WINNER:
**Fail Secure Exit
Device**

A company I do work for had a problem with employees leaving the employee entrance unlocked whenever they entered the building with their key. The door had a panic exit device on it with a Schlage T-turn mortise cylinder.

What I did to solve the problem is put a Sargent off-set cam on the back of the mortise cylinder. The off-set cam would allow the plug to turn far enough to unlock the trim, but not far enough to continue the unlocking motion to the point where the key could be removed.

Now, although the trim could be unlocked and the door opened, the key could not be removed from the mortise cylinder until the key was returned to the upright position. Now when the door is closed, it has to be locked.

Hector Cameron,
Nova Scotia



1995
THE SIEVEKING AUTO
KEY GUIDE WINNER:
Glue Stick Uses

While replacing a lock on a NKL safe with spacing washers behind the lock, I found out just how difficult it can be to hold more than one washer in place while trying to start the screws at the same time.

Remembering that I had a "Scotch Re-stickable Adhesive" Glue stick in my tool box, I put a dab of it on each washer and they stayed put while I installed the new lock.

Several other uses I can think of for the glue stick is for strike plates, drill templates and almost anything that you need to keep in place temporarily. The stuff works really well.

John Lee
Pennsylvania

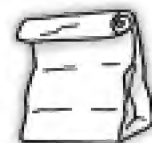


JET KEY BLANKS
WINNER:
Code Locations

When originating keys for a vehicle, most books, including AutoSmart, recommend looking for the code in the owner's manual where it is written in by the dealer.

More often, I find the code written on the sales contract in the envelope with all the other vehicle papers. It's amazing how many folks carry this document in their car with them. Many banks and finance companies will also have the key code on the contract in case they have to repossess the vehicle.

Charles Donnelly
New York



JAKE'S GRAB BAG
PRIZES WINNER:
Fill In The Blanks

A customer brought in a Master 17 padlock that he'd lost keys to. The code had been partially removed from the bottom of the lock and the number had not been recorded. The numbers we could decipher were: 1_T_52.

By reviewing our suppliers list of stocked keyed alike numbers for that series, we decided to try 19T452, as this was the only number to fit in with the partial we had. It worked like a charm.

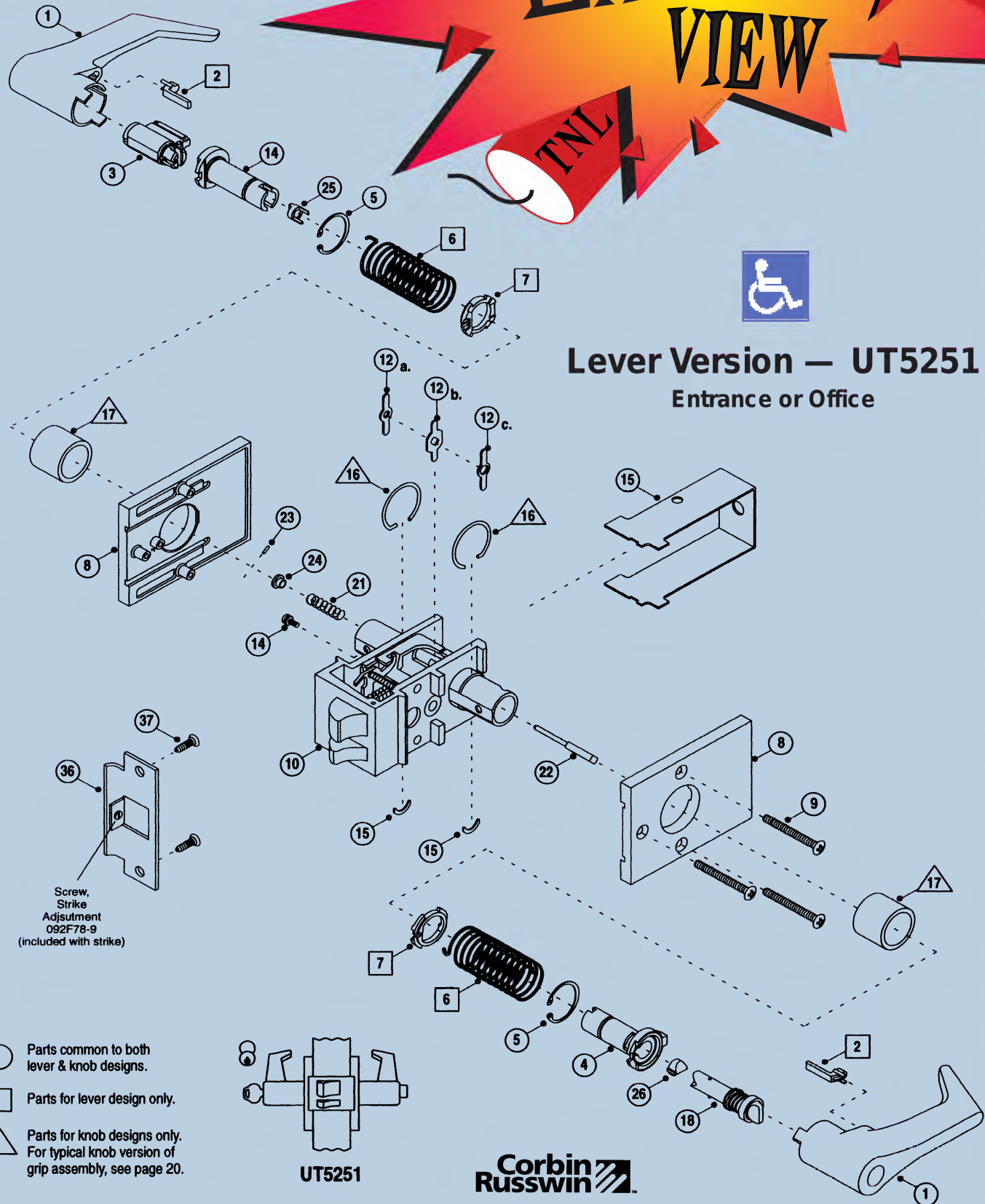
Now, I keep that list handy for just such an emergency.

Elain Willhoite, CCL
California

EXPLODED VIEW



Lever Version — UT5251 Entrance or Office





Lever Version — UT5251

Entrance or Office

UT5251 - Entrance or Office

ITEM	PART NO.	SPECIFY	DESCRIPTION
①	(see chart below)		Lever or Knob; cylinder/button both sides
②	613F02-9		Lever Insert (gray)
③	2000-052	fin	Standard Cylinder (see page 23 for options)
④	188F75-8 188F73-8 187F07-8 147F08-8		Lever Shank, outside Lever Shank, inside Knob Shank, outside Knob Shank, inside
⑤	242F50-8 219F80-8		Shank Retainer for lever knob
⑥	103F44-8 103F45-8		Return Spring clockwise (RH) lever counter-clockwise (LH) lever
⑦	171F79-8		Return Spring Anchor
⑧	144F33 144F34 301F56-7 605F90 415F15 415F16 415F27-7 605F91	fin fin	Escutcheon (lever trim) inside inside outside, extended lip inside, lead lined option M28 Escutcheon (knob trim) inside outside outside, extended lip inside, lead lined option M28
⑨	222F85	fin	Mounting Screw

ITEM	PART NO.	SPECIFY	DESCRIPTION
⑩	496F32	fin	Chassis
⑪	138F88-8		Chassis Cover
⑫ a.	060F42-8		Hub
⑫ b.	140F07-8		Hub
⑫ c.	140F97-8		Hub
⑭	249F76-8		Screw, fixed escutcheon
⑮	078F07-8		Grip Retainer
⑯	078F08-8		Grip Retainer Ring
⑰	401F08	fin	Sleeve
⑱	157F11	fin	Button Assy.
⑲	249F77-3		Spindle Spring
⑳	144F30-8		Spindle
㉑	019F13-7		Spindle Drive Pin
㉒	019F11-7		Spindle Spring Seat
㉓	144F29-8		Plug Driver
㉔	205F61-8		Plug Driver Assy. Follower
㉕	236L75M020	fin	ANSI Strike (see page 23 for options)
㉖	480F70	fin	Screw Packet for strike

Levers (Specify Finish)

Note: Levers are handed.

RH lever: Clockwise rotation. For
outside of RH or RHR locks and
inside of LH or LHR locks.

LH lever: Counter-clockwise rotation. For
outside of LH or LHR locks and
inside of RH or RHR locks.

	Regular		Knurled	
	Essex (RH) 	Essex (LH) 	Essex (RH) 	Essex (LH)
Cylinder or Button	582F11-2	582F12-2	582F13-2	582F14-2
6-Pin IC	489F88-2	489F89-2	549F35-2	549F36-2
7-Pin IC	613F22-2	613F23-2	613F24-2	613F25-2
Best Style IC	613F36-2	613F37-2	613F38-2	613F39-2

Knobs (Specify Finish)

	Regular		Knurled	
	Global	Belmont	Global	Belmont
Cylinder or Button	383F65	406F32	575F57	575F63
6-Pin IC	482F75	438F79	577F54	577F59

Corbin
Russwin

DISTRIBUTOR CLOSE-UP...

U.S. Lock

In recent years, the security hardware industry has undergone enormous change - especially in the area of distribution. A number of suppliers have rapidly added multiple

warehouses in an attempt to reach their customers throughout the country in just one day. Many have not provided the service they intended and are now downsizing and closing branches. The perception that these suppliers portrayed to the industry was that of a fully stocked regional distribution center. As many Security Professionals have come to realize, perception is not always reality.

What is actually occurring is the inability of

these distributors to truly deliver what the customers require for their daily needs from their regional warehouse. Locksmiths are becoming more and more dissatisfied upon receiving orders from a regional warehouse, only to find that the majority of their

orders are split and shipped from multiple locations. As a full-line stocking distributor, U.S. Lock has made the commitment to carry large inventories ensuring 97% fill rates to our customers. We plan to add additional fully stocked distribution centers throughout the country.

Our goal at U.S. Lock is to reach an even higher standard of performance in customer satisfaction and continue our efforts in being your distributor of choice. We have placed our focus on five key areas:

- Advanced marketing and unique merchandising programs such as the "RX Dealer Only Keyway" designed to help Security Professionals grow their businesses
- 97% service levels
- Platinum prices (which are our best prices on every order without having to buy case lots)
- Friendly, knowledgeable, professional sales representatives ready to serve your daily needs
- The expansion into new markets with strategically located, fully stocked distribution centers

Our plans for expansion include the opening of 10 new distribution centers over the next 5 years with our efforts concentrated in the central and western regions. We are confident that as we continue to increase the number of locations enabling us to service your daily needs, we will be able to help you grow your business.

U.S. Lock has branches in Long Island, NY; Jacksonville, FL; Louisville, KY; Charlotte, NC and Sacramento, CA and can be reached at: 1-800-925-5000. **TNL**



Gene Merber, President

The ~~Lighter~~ Side

Nothing New



by
**Sara
Probasco**

"Looks like another beautiful day," I commented as I came into the shop one morning.

"Depends on how you look at it," Don muttered in reply. "I've got to go out to Mrs. Bagley's and see what the problem is with her back door lock."

"Again? I thought Keith had been out there twice already."

"He has."

"What seems to be the problem?"

"Well now, if I knew that, we wouldn't have to be running out there every few days, would we?"

I decided to let well enough alone and start working on the daily report, but Don wasn't ready to turn loose of the hornet's nest I had stirred up.

"And when I get through with that," he continued, "I've got to drive over to Hondo and get a safe open for the Toot-n-Totem. They've lost their combination."

"Surely they have it written down

somewhere. Maybe it's in their files," I offered.

"Nope," Don replied, "and nobody has a clue as to what it is."

"Oh, my," I sighed sympathetically.

"On top of everything else, the bid is due for the hospital at four o'clock, this afternoon, and I haven't had time to do diddly-squat about that." Don was tossing various tools into his tool box as he grumbled. He set two locksets on the workbench. "Tell Keith to go out to Findley's place and put in these deadbolts. Mrs. Findley will be there to show him where they go." He started for the door. "Dave's opening a vehicle down at the courthouse. When he gets back, see if he has time to master-key those locks for the Baptist church before he goes to the dentist at eleven."

"Anything in particular you want me to do, beyond the ordinary?" I asked.

"Just keep things on an even keel. I'll be back when I can."

"What about the hospital bid? Can I do anything on that?"

"The blueprints on the back table. You can start counting doors," he called back over his shoulder on his way out.

A simple task, it seemed. However, this is not something I recommend tackling on days when you're running a locksmith store by yourself. Between answering the phone, waiting on walk-in customers, and

dispatching service calls, I counted, recounted, and discounted doors on the hospital blueprints at least a dozen times before I got the number to come out the same three times in a row (a self-imposed requisite in figuring bids from blueprints). By then, David was back in the store and taking care of the front counter business between master-keying locks.

He was on his way to the dentist's office, when I grabbed the phone yet another time.

"Never mind sending your man to make me a set of keys," the woman said.

I recognized her voice as that of a customer who had called earlier. She was at the top of my list for Keith to take care of, whenever he finished the job he was working on. I scratched her off the growing list.

"Oh, good. You found them?" I asked.

"Yes. They were in the kangaroo's pouch, of all places," she replied.

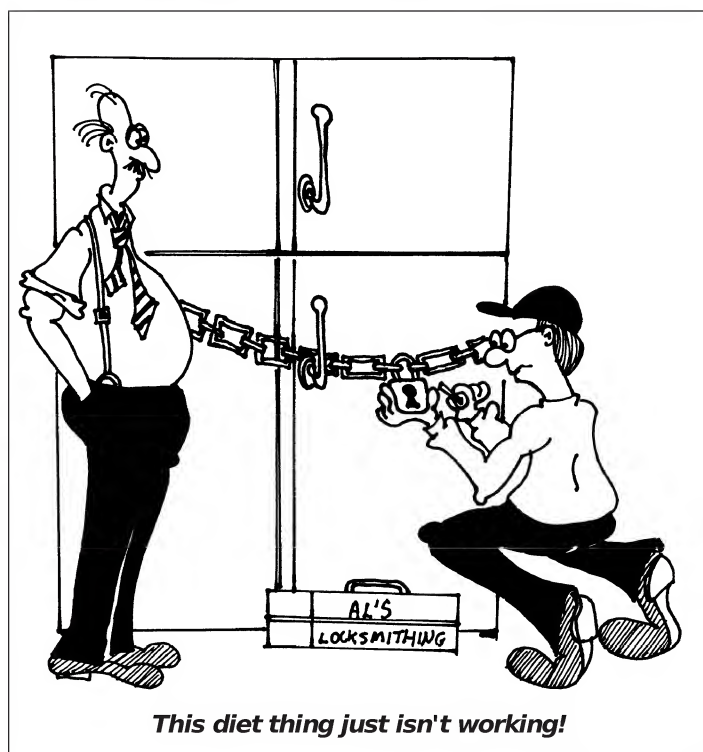
My stunned silence must have prompted her to expand on that a bit.

"My daughter's kangaroo," she added. "She's just two years old, and I guess she picked up my keys and was playing with them." She paused.

I was still trying to sort this out in my brain.

"My daughter, not the kangaroo," she said, laughing at herself. "She's not real." She laughed again. "The kangaroo, I mean, not my daughter. Of course my daughter's real. Well, the kangaroo is real, too, actually. What I mean is, Roo isn't a real-live kangaroo. She's just a stuffed toy, but she has this cute little pouch that was just the right size for my keys, I guess. Anyhow, we have them now, so we won't be needing you. Thanks just the same."

For some reason, that call made



Continued from page 84

my day. In the midst of various frustrations, as the day wore on, I would think of the flibbertigibbet who had a kangaroo and a daughter — or was it a kangaroo for a daughter — and everything in my day would flutter back into perspective.

Finally, Keith called in.

“Where are you?” I asked. “I expected you back over an hour ago.

“I’m still out here at the Findley’s,” he replied. “I’m through installing their deadbolts, but I have another problem.”

“What is it?”

“Well, I wondered if you have a spare set of keys to the service van, there at the store.”

“I’m sure we do. Why?” I asked.

“Well....” He cleared his throat and stammered a bit “...it seems like I, well, I sorta.... You know, this place is out in the middle of nowhere. Well, I locked up the van while I was working inside, and, well....”

“You didn’t!”

“I’m afraid so.”

“Tell me what you did,” I teased.

“Do I have to?”

“How can I help you, if I don’t know the problem?” I asked, trying not to let a laugh sneak into my words.

“If you must know, I locked my keys up in the van,” he admitted.

I couldn’t suppress a giggle, at that point.

“I’ve tried everything short of busting out a window,” he added, “but the tools are all locked inside it, and I can’t find any way to get in. You have no idea how embarrassing this is!”

When Don returned to the store, later that day, he asked, “Anything out of the ordinary happen around here, today?”

All thoughts of the kangaroo aside, I glanced sideways at Keith, who was busy at his workbench. There was a pleading look in his eyes.

“Nothing we couldn’t handle,” I said, winking at Keith as I handed Don his typed-up information for the hospital bid. **TNL**



SCHWAB CORP.

Fire protection for your vital records.

**It's not
safe unless it's
Schwab Safe.**

[Click here for more information](#)

THRU THE KEYHOLE

A Peek at Movers & Shakers in the Industry

ATTENTION MANUFACTURERS AND DISTRIBUTORS:

Would you like your company and products to be profiled in *Thru The Keyhole*? Please call Editor, Greg Mango, at (630) 837-2044.

All-Lock and VATS

With GM's VATS or PASS-Key system now over 10 years old, why does a locksmith, let alone a manufacturer, pursue aftermarket VATS equipment?

Rusty Alsbrook, Vice President of Aftermarket Sales and Marketing for All-Lock Company, Inc., which manufactures aftermarket VATS replacement keys, addressed this question.

"The reason for All-Lock even attempting to make VATS equipment and replacement keys is quite simple," said Alsbrook. "The market demands it."

"Until we (All-Lock) started producing our own version of the VATS key, pricing and availability of VATS keys was controlled by one

company," he said.

"Every show I went to, every class I taught, locksmiths were constantly looking for an alternate source for VATS equipment. All-Lock entered the VATS market to give the locksmith that choice. Since then, we have introduced the LT7000 Decoder, adapter keys, the LT6534 Key Reader, and now single and double sided VATS replacement keys," Alsbrook stated.

All-Lock introduced its first VATS replacement key in 1995. With a totally different look, the key quickly caught the locksmith's attention. Regarding the new look of the All-Lock VATS replacement key, Alsbrook stated. "When we first looked into manufacturing our own

key, we immediately set down two criteria for an end product. First and foremost, it would have to meet or exceed the quality of the original equipment GM VATS key. Without that I wouldn't feel comfortable selling it to the locksmith. Second, in whatever design we choose, it would have to work flawlessly in all VATS lock applications."

According to Alsbrook, by basing the All-Lock key on some of GM's first designs of the VATS key, both criteria were met. He said, "The All-Lock key looks little like the current original

equipment GM VATS key. Missing is the trademark resistor pellet swaged into the blade of the key. In its place is a long tab or tongue that projects down from the head of the key, ending at the contact points. Our resistor is embedded in the head of the key, with leads moving down the blade to the contact points."

"The design was done for a couple of reasons, Alsbrook continued. "With the resistor embedded in the plastic head, it is wholly protected from the environment. Except for the contact points, no part of the electronics come into contact with outside elements. Plus, this design removes the possibility of a pellet being deliberately or accidentally knocked out of the key. So, basically, for the purposes of the key's quality, we believe this is a superior design. In fact, All-Lock guarantees the electronics of this key for life. Because the key is based on GM's initial concepts of a VATS key, it is already designed to fit all GM VATS lock applications."

Still, the new key was not met without opposition. Shortly after introducing the VATS key, All-Lock was sued by Strattec (formerly Briggs & Stratton) for patent infringement. While Strattec won the initial suit, the Federal Court of Appeals overturned that decision and ruled that All-Lock did not in any way infringe on the patent.

"Unfortunately, it was really the locksmiths who lost out during that time," Alsbrook said. "Still, the time during the appeal allowed us to refine some of the important components of the key. The contacts, for instance, were totally redesigned and tested and what we have now is a VATS replacement key that not only fits all VATS lock applications, it also meets or exceeds all requirements for GM's VATS keys," Alsbrook stated.

For more information on VATS equipment and VATS service, contact All-Lock at 900 Ravenwood Dr., Selma, AL 36701, or phone (800) 647-4926. **TNL**

SRI
SECURITY
RESOURCES INC.

**SRI and Steve
Young are working
together to bring
you the best in
locksmith tools and
supplies.**

[Click here for more information](#)

N o H o l d s B a r r e d

The Small Latch Lock

by Joe Bucha, CML & Dee Bucha CPL

We appreciate the warm welcome back from some of our readers. In answer to a great many questions regarding education, which is one of our favorite subjects, we offer the following information. First: read this magazine. While this is admittedly a long term commitment, the details you can pick up here can only be obtained through experience or greater detail than that which can be afforded in an eight hour class. As for classroom study there are several choices for instruction through association membership or through the offices of your nearest American Security Distribution branch. Education is, quite literally, as close as your telephone.

If you aren't currently a member of a professional locksmith association, get enrolled! As newcomers to the industry a few short decades ago, we can tell you from experience, membership is essential to your educational and professional future, particularly if you want reasonably priced instruction! Had it not been for a superior friendship with a fellow locksmith, who sponsored us into the nearest membership in several local, state and national organizations, we would probably still be out there experiencing the school of hard locks with each new security device or every new technique introduced in the industry. Having been there and done that, we can only recommend that you follow suit: support your associations and they will, in turn, support you!

'Nuff said! Now, let's hop into our next detention lock and look around.

1. Latching versions of this lock are numbered as a #17 in the case of Folger Adam 4017 for Adtec, 1017 for Southern Steel, and RR Brink tags their version as a 7017.

2. RR Brink also manufactures a pin tumbler version of the small latching lock identified as the 9017, which accepts standard Builder's hardware cylinders, using a Yale type cam.



We recently examined the #10, and equivalent, locks. Before we leave that subject, we should make you aware that while the #10 series locks are paracentric lever locks, two of the four manufacturers also have a mogul (pin tumbler) version of this lock. Folger Adam lists their version as a #10M,

Southern Steel refers to their model as a 1010M.

The new information for readers this month is that there are latching versions of the lock, which are very common in the field and widely used on wicket and food pass doors. (A wicket is an observation panel, usually

fairly small, which allows prison guards to check on a prisoner, but otherwise keeps the prisoner completely sealed off from outside contact when the panel is closed.)

Latching versions of this lock are numbered as a #17 in the case of Folger Adam (see *Illustration 1*), 4017 for Adtec, 1017 for Southern Steel, and RR Brink tags their version as a 7017. RR Brink also manufactures a pin tumbler version of this small latching lock (see *Illustration 2*), identified as the 9017, which accepts standard Builder's hardware cylinders, using a Yale type cam.

These small lever locks are keyed on one side only and utilize a five-lever system. They are often referred to as "snap" or "slam" locks, due to the fact that when you slam the lock shut, that slamming action automatically secures the lock. In the locksmithing industry we would identify this function as a "night latch." These small latching locks are slightly smaller than their dead bolt counterparts and measure 4" in length; 2-3/4" in height and 1-1/4" in depth. All manufacturers measurements are identical on this particular model.

What is different between the #10 and the #17 is the deadbolt becomes a latch, but, otherwise the function remains basic. Insert the correct key, unlock the lock, and open the door. When you slam the door, the lock relocks itself, thus securing the door. The #17 lock is a key retaining locks, just like the safe deposit locks you may already be used to. (Remember, however, these are only "half" a safe deposit lock. There is no "guard" key.)

You might want to make a note that pin tumbler mogul versions of these latching locks are also available (see *Illustration 3*). In the case of every manufacturer, the sizes of these locks are identical with that of the #17, but, of course, levers are not present. Instead, a mogul (pin tumbler) cylinder is utilized. The Adtec equivalent for the mogul cylinder latch is 2017, 17M1 is designated for Folger Adam, 9025 for RR Brink and 1017M is the Southern Steel version.

And finally, there is one additional version of this lock, known as a #15 by Folger Adam. On

this paracentric version, the latch itself is inset, and therefore not only invisible when locked, but almost impossible to tamper with (see *Illustration 4*). Study the conformation of the latch in this particular drawing. The latch is fully contained inside the lock body. The lock has a special cut-out at the back of the lock case. Now, examine the special angled keeper (strike). The L-shaped strike actually enters the lock body at the back side of the lock, the latch enters the strike and positive latching is accomplished. The latch bolt is specifically designed to work in this lock. In all cases, these locks are graded as medium security and are not intended for use on cell doors, due to their small size.

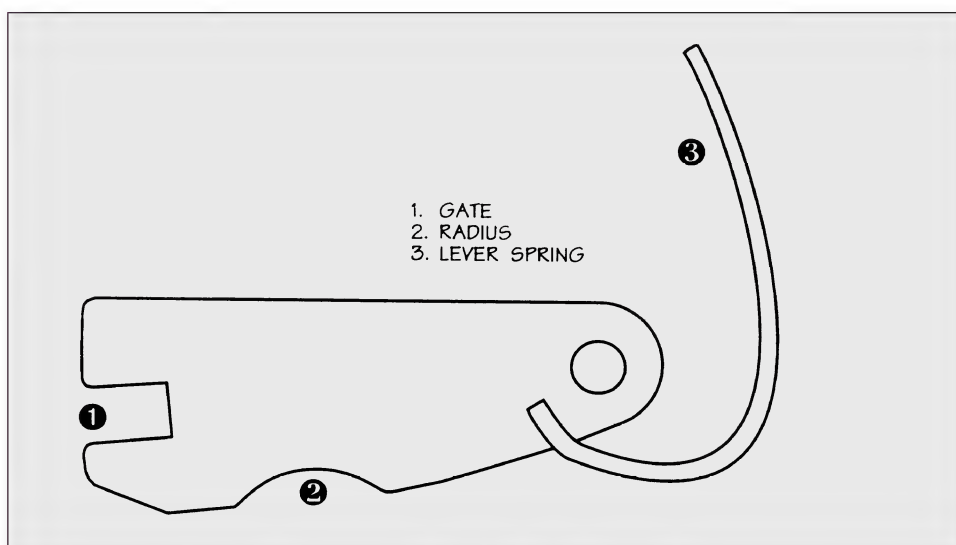
Many locksmith dealers,



3. Pin tumbler mogul versions of the latching lock.



4. On this paracentric version, the latch itself is inset, and therefore not only invisible when locked, but almost impossible to tamper with.



5. When examining the inside of the paracentric (lever) latching lock you can quickly spot the simplest of all lever designs: the open lever.

unfamiliar with snap or slam locks, have a tough time understanding why this function is so necessary. In short, safety for both guards and prisoners. In the case of wicket doors, the well-being of a prisoner being held, in solitary, for example, needs to be confirmed visually. When dealing with a slam lock feature on a cell door, guards sometimes require the speed of an automatically locking door. Fumbling for a key with which to lock (or relock) a door when a prisoner has decided to be something less than cooperative is a danger to both the guard and potentially, to the prisoner. As you can see, snap/slam locks are an extremely necessary choice in some situations.

When examining the inside of the paracentric (lever) latching lock you can quickly spot the simplest of all lever designs: the open lever (see *Illustration 5*). Clearly stated, this is the same type lever you will find in safe deposit boxes, only on a larger scale, and there is nothing tricky about the operation. Insert the correct key, turn the key, and line up the gates. The fence slips through the gate and retracts the latch. Once open, the key is turned to relock the lock, but the food pass door is open so that trays can be passed into the cell. Once a meal is over, there is no need to use the key again. Trays are collected and the doors are slammed shut and lock automatically. One very large advantage here is that a deputy or guard can open food pass locks and go on with other duties. Trustees, or non-key carrying jail personnel can serve food and collect trays after a meal is completed, then secure the food pass doors with a quick slam.

Joe's Tip of the Month

For those who believe these small locks are all fully interchangeable...think again. While it's true, in the case of locks of the same dimension among several manufacturers, that you can remove one manufacturer's lock and use the existing prep for another manufacturer's lock, the similarities stop there. What many locksmiths do not know is that you cannot necessarily swap the internal parts around in these locks. There are very real differences in lever size

and design that can trip you up if you damage the springs and try to replace them with the incorrect manufacturer's parts. It would be very similar to attempting to use Schlage factory pins in a Kwikset lock. One or two may be close but they aren't intended to service the same lock!

Another point that must be considered is the overall design of a prison. For example, food pass locks are generally all keyed the same in a given facility. Imagine the confusion if you randomly replace 10 of 100 locks scattered around a prison with a

different manufacturer's product. Compare it to taking the time and trouble to master key a 100 room motel which utilizes brand X lock, then having someone come in and randomly replace 10 of those locks with brand Y. Keying will be a problem, as will your temper, should this occur!

I will almost always recommend that Folger Adam parts be placed in Folger Adam locks, etc., to ensure the integrity of the manufacturer's product, as well as the integrity of the prison design. **TRU**



STRATTEC™

**It's your
reputation.**

**Trust the
original.**

[Click here for more information](#)

Reed Report

Q. After a master key system has been completed and the job is finished, who owns the system, the locksmith or the customer?

A. This question has been going around for generations, and the answer would most likely be split 50/ 50. I will give you my opinion, but if anyone disagrees; I would welcome a letter to the editor. However, don't be real hard on me, Marc is liable to fire me.

My answer is the customer. When a locksmith creates and installs a system he generally sells that system to the owner of the property (the customer). The key word here is "sell." If the customer buys this system, he owns it, unless it is so stated in a contract that the locksmith shall maintain ownership. That is my legal opinion, which I am not qualified to give, so take it for what it is worth....\$1.19.

Q. I attended your seminar on "How to be a Millionaire Locksmith" last week in Minnesota. You stated that the 45 millionaires you interviewed did not use yellow page advertising. I can't for the life of me see how this could be possible. Would you please explain?

A. You are the third person from Minnesota to contact me and ask me the same question. I evidently had an "off" day for that many people not to understand what was said. I hope that no one ran out and canceled their yellow page ad. Here is what I said or at least what I hope I said. Of the 45 millionaires I interviewed, almost none spent their money on full page ads. As one locksmith told me, "People only use the yellow pages when they need me. If I have to wait until they need me, then I would never be a millionaire." All of the locksmiths were in the phone book, but most had a one, two, or three inch ad.

Q. I have LA, LB, and TC codes for Arco Bank Bags. I was told to use the YY series codes as a substitute. I did, but had no luck. Can you help me?

A. You were half way right. Use the YY code series, but first subtract (-) 2000 from the code. You may have to use a different key blank, but that should be easy enough to find out.

Q. Do you know of a master key for the Hudson TEM series?

A. 23351, Ilco #01122 or Hudson #H01.

Q. I have an Alpha file cabinet made in Taiwan, but I can't find the right key blank. Can you help?

A. Actually the cabinet was made in Japan. Use a Chicago KP13 blank. It is better than the original.



Yours For Better Security,

Bill Reed
Bill Reed

Scatter Shooting while wondering whatever happened to ... John Moran

Q. I have heard that the Shult mobile homes are using two master keys. Can you give me the cuts?

A. These locks are key-in-knob that are made in Taiwan, The keyway has the same spacing and depths as the Kwikset, and has mushroom pins in at least three chambers. The cuts are: 21626 and 26616.

Q. I have a Hudson HZ series lock. Are there any codes available?

A. Yes! Add (+) 200 and use the Hudson BB series, H20 blank.

Q. I have a Spartan showcase lock and was told to use a Chicago KP2 blank, but there is no way!

A. Yes there is a way. Cut the pin down to a three pin length.

Q. We had a customer bring in a combination padlock with BBB stamped on it. It said "Made in Hong Kong." They insisted on finding the right combination even though I promised a new "Made in USA" lock for the same price. Are there any books available that list these combinations?

A. Not to my knowledge. However, I have been told that one combination works all locks. I just happen to have that combination. 25-02-19. Good luck!

Q. Is there a conversion code for Hurd DH?

A. DH=GH.

Q. What can you tell me about KUMAHIRA?

A. Not much! These are safety deposit locks and keys that have the name SECURITY stamped on the rear of the case. If the door is open the key code will be stamped on the nose of the lock. I'm not sure, but I think you might get the code from Security Safe Co. (408) 740-6740. Don't tell them I told you to call. **TNL**

**If you'd like to attend a Bill Reed seminar
in 1998, choose from the following.
For more info, contact Bill directly
at (850) 476-2799.**

Mar. 21	Honolulu, HI	Aug. 1	Kansas City, MO
Apr. 18	Denver, CO	Aug. 15	Memphis, TN
May 2	Phoenix, AZ	Sept. 26	San Antonio, TX
June 6	Seattle, WA	Oct. 17	Washington, DC
July 18	Columbia, SC	Nov. 7	Salt Lake City, UT

The National Locksmith's

February 1998 Planning Calendar

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
<p>Lockmasters Combination Lock Manipulation (Jan 31-Feb 3) Lexington, KY 1-800-654-0637</p> <p>1</p>	<p>Lockmasters Comb. Lock Manipulation GSA Red Label Course Lexington, KY</p> <p>2</p>	<p>Lockmasters Comb. Lock Manipulation GSA Red Label Course Lexington, KY</p> <p>3</p>	<p>Lockmasters GSA Red Label Course Basic Safe Penetration Lexington, KY</p> <p>4</p>	<p>Lockmasters Basic Safe Penetration Lexington, KY</p> <p>5</p>	<p>Lockmasters Basic Safe Penetration Lexington, KY</p> <p>6</p>	<p>Westcoast Lock Collectors 21st Antique Lock Show Arcadia, CA 310-230-3004 eves.</p> <p>7</p>
<p>Westcoast Lock Collectors 21st Antique Lock Show Arcadia, CA Lockmasters Electronic Safe Lock Course Lexington, KY 1-800-654-0637</p> <p>8</p>	<p>Lockmasters Electronic Safe Lock Course Lexington, KY</p> <p>9</p>	<p>Lockmasters Electronic Safe Lock Course Lexington, KY</p> <p>10</p>	<p>Lockmasters Electronic Safe Lock Course Lexington, KY</p> <p>11</p>	<p>12 <i>Lincoln's Birthday</i></p>	<p>Mas-Hamilton Auditcon System 2100 Course Waco, TX 1-800-950-4744, Ext. 194</p> <p>13</p>	<p>North Carolina Locksmith Assoc. Annual Trade Show Charlotte, NC 704-694-2332</p> <p>14 <i>Valentine's Day</i></p>
<p>15</p>	<p>Lockmasters Fundamentals of Electricity Lexington, KY 1-800-654-0637</p> <p>16 <i>Washington's Birthday Observed</i></p>	<p>Lockmasters Fundamentals of Electricity Lexington, KY</p> <p>17</p>	<p>Lockmasters Fundamentals of Electricity Lexington, KY</p> <p>18</p>	<p>Lockmasters Fundamentals of Electricity Lexington, KY</p> <p>19</p>	<p>Lockmasters Fundamentals of Electricity Lexington, KY</p> <p>20</p>	<p>Mark Bates Associates Manipulation Training Nicholasville, KY 606-887-0496</p> <p>21</p>
<p>Mark Bates Associates Manipulation Training Nicholasville, KY</p> <p>22</p>	<p>Lockmasters Electronic Access Control Lexington, KY Professional Locksmithing (Feb 23-Mar 6) Oakland, CA 1-800-654-0637</p> <p>23</p>	<p>Lockmasters Electronic Access Control Lexington, KY Professional Locksmithing Oakland, CA</p> <p>24</p>	<p>Lockmasters Electronic Access Control Lexington, KY Professional Locksmithing Oakland, CA</p> <p>25 <i>Ash Wednesday</i></p>	<p>Lockmasters Electronic Access Control Lexington, KY Professional Locksmithing Oakland, CA</p> <p>26</p>	<p>Lockmasters Electronic Access Control Lexington, KY Professional Locksmithing Oakland, CA</p> <p>27</p>	<p>Lockmasters Professional Locksmithing (Feb 23-Mar 6) Oakland, CA</p> <p>28</p>



ASP - Your Auto
Service Center
for the World

KEY CODES

1998 Chrysler M Codes

M0001-2618

HPC 1200:

Code Card: CX102
Cutter: CW-1011
Punch Card: PX102
Codemax DSB # 262

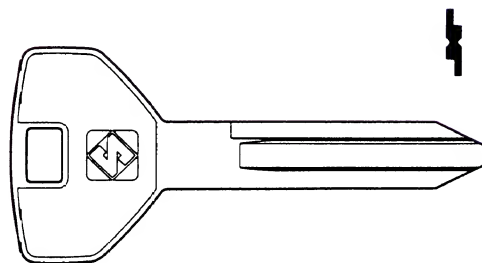
Framon:

Starting Cut: .309
Spacing Block: #3, .092 spacing
Align tip of key with left side of vice.

Key Blanks:

Curtis — Y157
ESP — Y157
Ilco — Y157
Jet — Y157
Silca — CY22
Strattec — 596504
Strattec Smart Key Immobilizer — 598495
Gauged: Tip to Bow

Note: Codes are printed Bow to Tip.



Spacing:

1 - .942 5 - .574
2 - .850 6 - .482
3 - .758 7 - .390
4 - .666 8 - .298

Depths:

1 = .340
2 = .315
3 = .290
4 = .265

CODE	BITTING	M0033	42342124	M0066	42431132	M0099	42332132	M0132	43242442	M0165	24224421
M0001	32431242	M0034	32331211	M0067	44223343	M0100	32424231	M0133	42312212	M0166	44332121
M0002	13133213	M0035	24213211	M0068	23421221	M0101	43113242	M0134	44312443	M0167	12332343
M0003	21234311	M0036	24323132	M0069	34342123	M0102	12321313	M0135	42313232	M0168	32113344
M0004	31324332	M0037	32132131	M0070	23311231	M0103	24332421	M0136	34242231	M0169	13132344
M0005	13432234	M0038	24234231	M0071	32233113	M0104	24432231	M0137	23131223	M0170	11224424
M0006	43431312	M0039	34423311	M0072	23121134	M0105	13324224	M0138	13343224	M0171	32121242
M0007	24323313	M0040	24342433	M0073	34332132	M0106	32323242	M0139	21242433	M0172	22113313
M0008	31244322	M0041	43212242	M0074	42423334	M0107	24321311	M0140	23231132	M0173	13323342
M0009	22311211	M0042	44332342	M0075	22422131	M0108	13423242	M0141	34313124	M0174	13231133
M0010	21122431	M0043	12442113	M0076	24321212	M0109	43312332	M0142	12132242	M0175	43131332
M0011	13434312	M0044	43342121	M0077	42112113	M0110	31134432	M0143	13234422	M0176	42324442
M0012	12431312	M0045	44324332	M0078	23443244	M0111	33423424	M0144	43231313	M0177	43321332
M0013	34344232	M0046	32442442	M0079	43422433	M0112	22433232	M0145	31133424	M0178	33112433
M0014	31233423	M0047	32331121	M0080	13312231	M0113	44243234	M0146	42212243	M0179	43232231
M0015	34311224	M0048	13224311	M0081	24242443	M0114	23424312	M0147	42443234	M0180	32421123
M0016	13323121	M0049	22434312	M0082	13434231	M0115	13431212	M0148	42424432	M0181	11334423
M0017	44243422	M0050	23112322	M0083	24212321	M0116	34232443	M0149	42232234	M0182	11313242
M0018	22122313	M0051	33421113	M0084	23321324	M0117	23112233	M0150	32231131	M0183	13422131
M0019	32113312	M0052	31313131	M0085	43313132	M0118	32312131	M0151	23424231	M0184	24223134
M0020	13131134	M0053	32131134	M0086	32234313	M0119	43313443	M0152	33243312	M0185	23313431
M0021	34342432	M0054	13432121	M0087	34422124	M0120	34431312	M0153	11232113	M0186	43313124
M0022	21344322	M0055	22434223	M0088	43323442	M0121	23132131	M0154	12124231	M0187	33431224
M0023	33442342	M0056	42423131	M0089	44324323	M0122	33242313	M0155	13434442	M0188	13442421
M0024	43232312	M0057	22131242	M0090	42312311	M0123	24331121	M0156	33422443	M0189	23434221
M0025	31212133	M0058	22421312	M0091	43134321	M0124	21323132	M0157	42113342	M0190	22342121
M0026	21343113	M0059	42132244	M0092	32312432	M0125	13113224	M0158	13221331	M0191	13312124
M0027	43232132	M0060	23212133	M0093	21124322	M0126	34343242	M0159	34211321	M0192	23432134
M0028	12213242	M0061	23112134	M0094	34421232	M0127	21323432	M0160	34434331	M0193	21313443
M0029	44321313	M0062	24213234	M0095	43421132	M0128	11343423	M0161	33442221	M0194	13424232
M0030	13312132	M0063	32433442	M0096	31221313	M0129	43242124	M0162	43323213	M0195	24232121
M0031	43442431	M0064	31231233	M0097	43244242	M0130	42344234	M0163	13224243	M0196	11344332
M0032	12323424	M0065	32112313	M0098	33442311	M0131	23113124	M0164	24224434	M0197	31132434



1998 Chrysler M Codes M0001-2618

M0198	22324332	M0261	42243131	M0323	34323213	M0335	22313424	M0347	42234321	M0359	11224224
M0199	13223123	M0262	21233124	M0324	43344313	M0336	31323121	M0348	12342311	M0360	42232313
M0200	12324221	M0263	24342231	M0325	42433423	M0337	13242123	M0349	32243134	M0361	32112434
M0201	31332342	M0264	23121242	M0326	12244324	M0338	22313432	M0350	31133124	M0362	13134234
M0202	21224312	M0265	21332124	M0327	24243132	M0339	23113312	M0351	23324313	M0363	42312423
M0203	13242243	M0266	42323124	M0328	31334322	M0340	13113322	M0352	24311234	M0364	44332113
M0204	13242212	M0267	44332243	M0329	23324331	M0341	32131224	M0353	42324343	M0365	11244243
M0205	23213334	M0268	43422131	M0330	32231212	M0342	44242243	M0354	22334331	M0366	24332224
M0206	24232323	M0269	11331242	M0331	43311221	M0343	21334234	M0355	22311234	M0367	32243421
M0207	22313343	M0270	42342223	M0332	31124312	M0344	12243212	M0356	24421323	M0368	32421311
M0208	22432234	M0271	34223124	M0333	22313244	M0345	44233211	M0357	43113422	M0369	24422434
M0209	43122332	M0272	23132343	M0334	34342244	M0346	23123423	M0358	34431321	M0370	31313432
M0210	12432243	M0273	43133132								
M0211	44232131	M0274	31242244								
M0212	31131234	M0275	32321344								
M0213	13313311	M0276	32213311								
M0214	23132213	M0277	33131221								
M0215	31322131	M0278	12133421								
M0216	22421321	M0279	42342433								
M0217	22342332	M0280	43324324								
M0218	24342312	M0281	43424431								
M0219	11322121	M0282	23242121								
M0220	22443312	M0283	24243442								
M0221	13234431	M0284	34432432								
M0222	24332313	M0285	44342234								
M0223	11242424	M0286	12433242								
M0224	44243324	M0287	12331232								
M0225	22132421	M0288	42342321								
M0226	44244331	M0289	31321321								
M0227	21123313	M0290	31213231								
M0228	13131322	M0291	33112312								
M0229	11212424	M0292	23123131								
M0230	24324321	M0293	33132211								
M0231	13322432	M0294	23431234								
M0232	23213221	M0295	44242113								
M0233	42244212	M0296	11313224								
M0234	31123244	M0297	44332432								
M0235	34311212	M0298	44324224								
M0236	43324342	M0299	12331134								
M0237	43442324	M0300	33434242								
M0238	13134432	M0301	33131212								
M0239	44223334	M0302	34221311								
M0240	43322434	M0303	33232422								
M0241	11231323	M0304	32212231								
M0242	32112331	M0305	33123121								
M0243	32212132	M0306	43312323								
M0244	34313231	M0307	42121121								
M0245	42443422	M0308	12313133								
M0246	43234311	M0309	11342321								
M0247	34321332	M0310	34212212								
M0248	33421323	M0311	24234312								
M0249	42343334	M0312	42311312								
M0250	32342134	M0313	33231211								
M0251	32124221	M0314	12422442								
M0252	23421212	M0315	44323342								
M0253	31312312	M0316	34221113								
M0254	12421134	M0317	12123313								
M0255	32423312	M0318	12343242								
M0256	23113231	M0319	34212311								
M0257	13211332	M0320	22343134								
M0258	22134432	M0321	34422343								
M0259	22323342	M0322	44313312								
M0260	32323421										



*We have it all.
Quality, Value,
& Service.*

[Click here for more information](#)



The
Innovation
You Expect,
with the
Flexibility
You Need!

[Click here for more information](#)

1998 Chrysler M Codes M0001-2618

M0371	44233243	M0433	21124421	M0495	13121243	M0557	24431224
M0372	12431132	M0434	13243431	M0496	43121343	M0558	42442432
M0373	21212423	M0435	13344231	M0497	24313323	M0559	32242324
M0374	13313221	M0436	42424243	M0498	23442321	M0560	43113431
M0375	32313113	M0437	44224342	M0499	31122422	M0561	43224343
M0376	12342123	M0438	32433132	M0500	13442232	M0562	32421121
M0377	11343131	M0439	22443132	M0501	33211213	M0563	31121323
M0378	43321323	M0440	32431234	M0502	11233133	M0564	21243342
M0379	22433224	M0441	21331312	M0503	13442313	M0565	32243224
M0380	24342132	M0442	12132313	M0504	32431332	M0566	33112223
M0381	12132134	M0443	13113434	M0505	44343134	M0567	23443424
M0382	13431123	M0444	12442211	M0506	32423443	M0568	43213313
M0383	12313231	M0445	12232442	M0507	33131131	M0569	21342334
M0384	12243243	M0446	13311331	M0508	43211243	M0570	34231323
M0385	24244243	M0447	31224432	M0509	21313312	M0571	22431123
M0386	12112423	M0448	32242113	M0510	32342224	M0572	42213324
M0387	11321334	M0449	21343324	M0511	24221312	M0573	32443342
M0388	12324212	M0450	12213313	M0512	24331113	M0574	42433432
M0389	11344324	M0451	31342113	M0513	12244234	M0575	43322313
M0390	34431132	M0452	32313211	M0514	12231211	M0576	12133124
M0391	44313334	M0453	23342331	M0515	32324223	M0577	21313133
M0392	34322443	M0454	24324244	M0516	12442431	M0578	22343331
M0393	44332311	M0455	22334313	M0517	34243334	M0579	13431311
M0394	21244332	M0456	34331322	M0518	22312443	M0580	33432231
M0395	24231311	M0457	23312131	M0519	43133443	M0581	12332423
M0396	33424311	M0458	11334432	M0520	24311342	M0582	43423423
M0397	23321124	M0459	13443442	M0521	31211323	M0583	23233113
M0398	31234422	M0460	42432442	M0522	33424342	M0584	31233432
M0399	42321233	M0461	42112433	M0523	32233431	M0585	32432331
M0400	23122442	M0462	34432243	M0524	34334211	M0586	44312313
M0401	42324433	M0463	31322432	M0525	22134221	M0587	32213343
M0402	24211322	M0464	22342211	M0526	23124212	M0588	32313121
M0403	42234243	M0465	23121331	M0527	12124322	M0589	13443223
M0404	43113324	M0466	11231332	M0528	31224221	M0590	31234431
M0405	31131331	M0467	32134211	M0529	44213434	M0591	22431342
M0406	11344234	M0468	31323342	M0530	24223233	M0592	23342134
M0407	13113331	M0469	31343224	M0531	11322113	M0593	13123223
M0408	31122331	M0470	33242443	M0532	11331322	M0594	22334421
M0409	42432223	M0471	11332232	M0533	24331323	M0595	34342221
M0410	42113423	M0472	43324243	M0534	33123422	M0596	42132423
M0411	32343231	M0473	13432211	M0535	11311223	M0597	31131242
M0412	23231343	M0474	42432131	M0536	31242212	M0598	23431113
M0413	23323242	M0475	11331234	M0537	24244311	M0599	34224343
M0414	32133212	M0476	42323132	M0538	43323123	M0600	42133431
M0415	12234423	M0477	43224442	M0539	44321331	M0601	31324224
M0416	11242322	M0478	11244213	M0540	11242224	M0602	22134311
M0417	44231231	M0479	23424321	M0541	31124342	M0603	12344331
M0418	43112342	M0480	22443344	M0542	24323434	M0604	42334423
M0419	32121331	M0481	11343342	M0543	44213443	M0605	22442134
M0420	42243321	M0482	24323344	M0544	21124231	M0606	13122134
M0421	12321113	M0483	23434212	M0545	22342234	M0607	13342422
M0422	42134443	M0484	32334442	M0546	31232344	M0608	31132421
M0423	31243431	M0485	23221344	M0547	42324321	M0609	32421342
M0424	44344231	M0486	12124344	M0548	24324213	M0610	21131323
M0425	32234224	M0487	43323131	M0549	24324433	M0611	24234321
M0426	34232331	M0488	33423442	M0550	32423232	M0612	32442132
M0427	12123242	M0489	44334223	M0551	21244234	M0613	31231134
M0428	43342212	M0490	42431134	M0552	12234212	M0614	12133132
M0429	13244313	M0491	43133434	M0553	12343431	M0615	11343123
M0430	33232431	M0492	24423312	M0554	13233121	M0616	43223132
M0431	24322323	M0493	43213331	M0555	34224312	M0617	42231323
M0432	34221121	M0494	42243344	M0556	43243432	M0618	43132234



M0619	24332134	M0687	21324243
M0620	33113311	M0688	32344243
M0621	12424242	M0689	43442332
M0622	24234424	M0690	12312242
M0623	24431313	M0691	32344221
M0624	23112224	M0692	13432113
M0625	44212323	M0693	13123424
M0626	44342324	M0694	13133244
M0627	33113131	M0695	22344231
M0628	34242132	M0696	11313134
M0629	13113443	M0697	43344331
M0630	11343212	M0698	34243244
M0631	33134232	M0699	13313432
M0632	13132124	M0700	13131242
M0633	34313223	M0701	11313313
M0634	12431223	M0702	21334431
M0635	13213312	M0703	33424221
M0636	32442231	M0704	23433231
M0637	34232313	M0705	24432442
M0638	43233442	M0706	23313243
M0639	24423442	M0707	13421321
M0640	12324423	M0708	43311233
M0641	12421232	M0709	31312443
M0642	34323312	M0710	43342123
M0643	23431332	M0711	34312134
M0644	34421331	M0712	42311321
M0645	33221131	M0713	31322311
M0646	34431231	M0714	31123224
M0647	42443332	M0715	23134422
M0648	32113223	M0716	31342242
M0649	42423433	M0717	23233134
M0650	12423131	M0718	21332132
M0651	24343131	M0719	23421131
M0652	24311324	M0720	13323113
M0653	44343421	M0721	42124211
M0654	43124223	M0722	33112442
M0655	11243132	M0723	11313233
M0656	44334313	M0724	31244232
M0657	22423113	M0725	23243313
M0658	31124223	M0726	32134324
M0659	43344224	M0727	11343243
M0660	22133131	M0728	23124221
M0661	44312322	M0729	44224211
M0662	43223312	M0730	32332113
M0663	44312232	M0731	22334232
M0664	11334311	M0732	32124423
M0665	42234442	M0733	13123344
M0666	31234234	M0734	43123232
M0667	13213442	M0735	22113331
M0668	13344321	M0736	24212312
M0669	43131243	M0737	31322324
M0670	32113231	M0738	33243223
M0671	23424442	M0739	42313224
M0672	42121113	M0740	11343432
M0673	23422121	M0741	23122133
M0674	34234212	M0742	23133121
M0675	32434244	M0743	22432332
M0676	24242434	M0744	23124243
M0677	32133432	M0745	32442344
M0678	21132211	M0746	31242334
M0679	24244212	M0747	13134311
M0680	33123234	M0748	13243332
M0681	21342311	M0749	23313422
M0682	43324211	M0750	42323231
M0683	42443242	M0751	13342332
M0684	13232321	M0752	42124324
M0685	42213332	M0753	22342113
M0686	31212421	M0754	24431322



HPC, Inc.
Designing Excellence and
Manufacturing Quality
since 1956

[Click here for more information](#)



1998 Chrysler M Codes M0001-2618

M0755	13324233	M0817	33431134	M0879	24422313	M0941	12243221	M1003	12422124	M1065	13113242
M0756	42342314	M0818	44224234	M0880	13113313	M0942	11323133	M1004	43234342	M1066	42231332
M0757	44224423	M0819	34431124	M0881	33443324	M0943	23323134	M1005	22124321	M1067	24421332
M0758	23312324	M0820	43112432	M0882	23244321	M0944	12132422	M1006	22344312	M1068	34223443
M0759	23233242	M0821	24242331	M0883	33224313	M0945	24223323	M1007	43432342	M1069	42343423
M0760	33122131	M0822	34211324	M0884	32113124	M0946	44312434	M1008	42243223	M1070	23213131
M0761	34334431	M0823	33112321	M0885	13224234	M0947	31124321	M1009	13243211	M1071	23433421
M0762	33432442	M0824	22423121	M0886	32232423	M0948	34423432	M1010	42112121	M1072	31243332
M0763	22312133	M0825	12134312	M0887	34211234	M0949	33432132	M1011	43342432	M1073	43322443
M0764	33234442	M0826	21313321	M0888	33234231	M0950	11234312	M1012	42122334	M1074	34343121
M0765	32342443	M0827	23113223	M0889	21324342	M0951	42424342	M1013	13323422	M1075	12242321
M0766	33424244	M0828	43312134	M0890	42112343	M0952	22131313	M1014	42131343	M1076	42313323
M0767	13342323	M0829	12431231	M0891	23442124	M0953	23213343	M1015	42321311	M1077	33113221
M0768	12332124	M0830	23321132	M0892	23313234	M0954	44342242	M1016	24211343	M1078	34342311
M0769	42211343	M0831	43243244	M0893	21231322	M0955	12311243	M1017	13234323	M1079	31323234
M0770	31313212	M0832	32244312	M0894	12231113	M0956	31232133	M1018	31331131	M1080	32244223
M0771	21243432	M0833	23122344	M0895	21334211	M0957	13234242	M1019	33232242	M1081	34232421
M0772	23443342	M0834	31311322	M0896	43431321	M0958	33121223	M1020	24334324	M1082	32131231
M0773	33242322	M0835	34331232	M0897	22332213	M0959	43231232	M1021	12421224	M1083	34423423
M0774	13223131	M0836	34234342	M0898	23124324	M0960	12334422	M1022	43213232	M1084	31123421
M0775	22422334	M0837	21124244	M0899	42121344	M0961	42344332	M1023	44331131	M1085	13123433
M0776	23432224	M0838	42433211	M0900	21132242	M0962	24434242	M1024	43242433	M1086	34431343
M0777	12334242	M0839	12342212	M0901	43343422	M0963	43313434	M1025	13212313	M1087	33211343
M0778	13121332	M0840	12432334	M0902	33223134	M0964	13421124	M1026	32132124	M1088	42112211
M0779	34223434	M0841	33213234	M0903	22324211	M0965	43121334	M1027	43213224	M1089	23313121
M0780	43422424	M0842	12443322	M0904	32133121	M0966	43424242	M1028	44223442	M1090	12242312
M0781	43442234	M0843	21132313	M0905	13221313	M0967	32133123	M1029	42133113	M1091	24233232
M0782	42321212	M0844	24342442	M0906	21331231	M0968	12112342	M1030	13431334	M1092	34234234
M0783	22134423	M0845	13122443	M0907	34313344	M0969	32113321	M1031	22334224	M1093	24433243
M0784	12442332	M0846	24233421	M0908	43342311	M0970	31224423	M1032	31323211	M1094	11342223
M0785	23242332	M0847	13431131	M0909	23123244	M0971	23212442	M1033	34432131	M1095	32442321
M0786	31123132	M0848	12313443	M0910	33124233	M0972	32112224	M1034	12443224	M1096	12133442
M0787	43231234	M0849	23123213	M0911	24321221	M0973	31312132	M1035	23223431	M1097	24213243
M0788	23234313	M0850	42423442	M0912	12433121	M0974	23324223	M1036	42433123	M1098	33134322
M0789	43424233	M0851	33131123	M0913	33212131	M0975	13343134	M1037	23324322	M1099	34242424
M0790	42424234	M0852	34424431	M0914	23431211	M0976	12124213	M1038	11243321	M1100	23434244
M0791	42134421	M0853	23421123	M0915	13431221	M0977	32112421	M1039	22321134	M1101	42232433
M0792	21243243	M0854	23113424	M0916	33242232	M0978	42422134	M1040	11331331	M1102	23134431
M0793	31243211	M0855	13122434	M0917	33231113	M0979	23442434	M1041	31242311	M1103	43322421
M0794	33244342	M0856	11243124	M0918	23113344	M0980	42434332	M1042	33421242	M1104	34313421
M0795	21213242	M0857	34242344	M0919	24224331	M0981	42343212	M1043	31312231	M1105	23134332
M0796	12424324	M0858	24424211	M0920	43342423	M0982	43342334	M1044	31134311	M1106	13242131
M0797	13313212	M0859	11322331	M0921	12244242	M0983	31321134	M1045	12122311	M1107	43122422
M0798	42334311	M0860	44323423	M0922	13212134	M0984	21231242	M1046	33434324	M1108	42422443
M0799	31344223	M0861	34423221	M0923	12313223	M0985	31331221	M1047	24242313	M1109	13221121
M0800	24424234	M0862	12443313	M0924	42442121	M0986	42113243	M1048	21212342	M1110	21232134
M0801	34213232	M0863	44332423	M0925	32124311	M0987	24344211	M1049	42133422	M1111	24213342
M0802	33213324	M0864	31242123	M0926	22323423	M0988	21342221	M1050	34324324	M1112	13213424
M0803	21313124	M0865	44242121	M0927	42332443	M0989	13134243	M1051	44224432	M1113	11332134
M0804	13342113	M0866	42312242	M0928	44321124	M0990	12312313	M1052	13131331	M1114	13134221
M0805	42124422	M0867	31221322	M0929	23131133	M0991	43113234	M1053	23123334	M1115	12443421
M0806	32113433	M0868	44243242	M0930	24232431	M0992	24421211	M1054	23112443	M1116	21134312
M0807	23112313	M0869	13221134	M0931	33242421	M0993	21231113	M1055	24343221	M1117	43211312
M0808	32332421	M0870	13124244	M0932	34311233	M0994	13213321	M1056	12132331	M1118	12324311
M0809	31134423	M0871	32322431	M0933	34323424	M0995	23322311	M1057	23342421	M1119	31243242
M0810	31213223	M0872	34234423	M0934	13211224	M0996	33123342	M1058	42112244	M1120	24233443
M0811	21321234	M0873	33443121	M0935	11223134	M0997	32443311	M1059	21332423	M1121	24334423
M0812	34224244	M0874	24324442	M0936	33121231	M0998	32443131	M1060	43121244	M1122	23312123
M0813	31131313	M0875	24433212	M0937	13424443	M0999	23211313	M1061	31243234	M1123	12432131
M0814	31321231	M0876	13342211	M0938	12344232	M1000	13211242	M1062	24324312	M1124	24432433
M0815	33124323	M0877	31343443	M0939	21313223	M1001	32134431	M1063	12424332	M1125	23343231
M0816	12131332	M0878	43224213	M0940	33113123	M1002	12134321	M1064	23113133	M1126	44313433



Continued from page 114

1998 Chrysler M Codes

M0001-2618

M1127	43423324	M1189	42133234	M1251	34232322	M1313	33124242	M1375	24332434	M1437	32243313
M1128	11321243	M1190	23232423	M1252	33442424	M1314	34332424	M1376	31334421	M1438	43134433
M1129	24343244	M1191	34233442	M1253	32113442	M1315	31311331	M1377	13442331	M1439	24432312
M1130	32321324	M1192	21131123	M1254	34421313	M1316	23123432	M1378	13322423	M1440	32231221
M1131	24243424	M1193	34432311	M1255	21334242	M1317	13422123	M1379	23212344	M1441	31211242
M1132	13232312	M1194	43243311	M1256	13342121	M1318	32231344	M1380	11311343	M1442	43134343
M1133	32331244	M1195	12422421	M1257	33122432	M1319	33244311	M1381	22311331	M1443	32324232
M1134	21124224	M1196	24323443	M1258	24211334	M1320	24342124	M1382	43213134	M1444	11324231
M1135	33213113	M1197	34312211	M1259	24231221	M1321	12313312	M1383	32313243	M1445	43211324
M1136	23113442	M1198	12424431	M1260	11334243	M1322	22313212	M1384	32132133	M1446	31332244
M1137	34422132	M1199	12424234	M1261	34324243	M1323	31343134	M1385	43434421	M1447	21234423
M1138	43324432	M1200	31131322	M1262	21312134	M1324	42343432	M1386	42124431	M1448	31344343
M1139	23344342	M1201	33243124	M1263	42422132	M1325	24323322	M1387	43424323	M1449	43244211
M1140	21123113	M1202	22312231	M1264	13233113	M1326	21244324	M1388	24224443	M1450	22442233
M1141	13242324	M1203	31243113	M1265	12134244	M1327	32231311	M1389	12423243	M1451	32443221
M1142	44244232	M1204	44234422	M1266	34234324	M1328	42133232	M1390	42423343	M1452	32112443
M1143	42311234	M1205	34243221	M1267	13211233	M1329	44342332	M1391	44242211	M1453	42312121
M1144	13442134	M1206	42243312	M1268	21313231	M1330	34224321	M1392	42244221	M1454	13223213
M1145	33133242	M1207	34421134	M1269	31234324	M1331	34243342	M1393	24342223	M1455	13124312
M1146	44223244	M1208	12311342	M1270	34332312	M1332	33242134	M1394	11233442	M1456	44343313
M1147	43311311	M1209	31124243	M1271	24232211	M1333	12243123	M1395	12133424	M1457	22331132
M1148	24424324	M1210	34232434	M1272	12231121	M1334	13313423	M1396	33213121	M1458	23434342
M1149	11344242	M1211	13131313	M1273	23122424	M1335	32422113	M1397	23321321	M1459	21124442
M1150	31334232	M1212	13132133	M1274	31242121	M1336	12242433	M1398	23442442	M1460	21344232
M1151	13221113	M1213	42432433	M1275	24422331	M1337	43243121	M1399	32113132	M1461	23232432
M1152	22431221	M1214	44211224	M1276	12443331	M1338	13234233	M1400	33422313	M1462	32213244
M1153	24434332	M1215	13242311	M1277	23124342	M1339	13113233	M1401	34342342	M1463	22242431
M1154	44234224	M1216	42422313	M1278	22131331	M1340	12334234	M1402	32121322	M1464	31323243
M1155	13423331	M1217	44334421	M1279	33113212	M1341	13122331	M1403	43234212	M1465	33132113
M1156	11342124	M1218	31313244	M1280	42113334	M1342	44342431	M1404	13212331	M1466	11313331
M1157	11324223	M1219	31324323	M1281	33431322	M1343	43424332	M1405	24334342	M1467	31231224
M1158	34424323	M1220	13342431	M1282	43123421	M1344	32443244	M1406	43421313	M1468	44321322
M1159	34432423	M1221	31244331	M1283	43112334	M1345	32234421	M1407	31122313	M1469	24224313
M1160	42434431	M1222	24321123	M1284	23343312	M1346	13124343	M1408	32432224	M1470	22344223
M1161	34212432	M1223	23244213	M1285	12234311	M1347	24311243	M1409	42442342	M1471	33422421
M1162	12123331	M1224	34324234	M1286	33213431	M1348	42422434	M1410	34242442	M1472	13311223
M1163	22443223	M1225	11312334	M1287	23431242	M1349	13442322	M1411	31121243	M1473	34323131
M1164	23223121	M1226	34324423	M1288	13242342	M1350	43234221	M1412	21243221	M1474	13443124
M1165	12131323	M1227	23443131	M1289	31313221	M1351	21231313	M1413	33244212	M1475	32211313
M1166	32324331	M1228	13224324	M1290	12313321	M1352	13321133	M1414	21213313	M1476	44221134
M1167	13324323	M1229	31132231	M1291	23312423	M1353	34324212	M1415	43434232	M1477	33134443
M1168	13313131	M1230	12312134	M1292	21344331	M1354	23422323	M1416	24311321	M1478	11343311
M1169	24431134	M1231	42431313	M1293	42442123	M1355	31212331	M1417	31134242	M1479	44324422
M1170	33213243	M1232	31321132	M1294	13213433	M1356	12124421	M1418	13212434	M1480	23244231
M1171	22343421	M1233	31331311	M1295	24422443	M1357	11231243	M1419	33442131	M1481	24221124
M1172	32342232	M1234	11233424	M1296	12112421	M1358	23232311	M1420	31311223	M1482	33121321
M1173	44224324	M1235	11224421	M1297	31344231	M1359	24423334	M1421	43432311	M1483	33443242
M1174	42324424	M1236	13132223	M1298	13234211	M1360	44212134	M1422	43133231	M1484	42432124
M1175	21243212	M1237	12123443	M1299	13221211	M1361	34342423	M1423	44324242	M1485	33442123
M1176	32442434	M1238	32311231	M1300	24243344	M1362	44211233	M1424	34232134	M1486	22123231
M1177	11234223	M1239	43242344	M1301	21343422	M1363	43443331	M1425	32442223	M1487	44232442
M1178	24322332	M1240	12434232	M1302	33421234	M1364	21234221	M1426	44244322	M1488	23242211
M1179	13421231	M1241	22432121	M1303	23433124	M1365	23131231	M1427	21343211	M1489	42134322
M1180	31234211	M1242	13212322	M1304	13233212	M1366	13213231	M1428	34223223	M1490	23313211
M1181	22113242	M1243	31342234	M1305	42211322	M1367	34433242	M1429	34223231	M1491	32213212
M1182	34324311	M1244	32213432	M1306	23344221	M1368	22442331	M1430	43112423	M1492	33442244
M1183	44312421	M1245	24212113	M1307	31123442	M1369	23312343	M1431	23133234	M1493	34234432
M1184	34221212	M1246	13323431	M1308	31331124	M1370	31232424	M1432	13434223	M1494	44313442
M1185	43313223	M1247	23421311	M1309	11224442	M1371	21331134	M1433	22134212	M1495	13431243
M1186	12423213	M1248	43343113	M1310	24432424	M1372	33424432	M1434	22313221	M1496	44233113
M1187	24324343	M1249	32343132	M1311	31211332	M1373	34324432	M1435	44334331	M1497	24423321
M1188	24343432	M1250	24232332	M1312	33113423	M1374	13123442	M1436	31134212	M1498	24231243



Continued from page 116

1998 Chrysler M Codes M0001-2618

M1499	34332124	M1561	13112332	M1623	42422421	M1685	43422343	M1747	13112323	M1809	23343442
M1500	21331233	M1562	34313132	M1624	32133423	M1686	24331332	M1748	22343224	M1810	22332431
M1501	24312242	M1563	24232113	M1625	34234221	M1687	24432343	M1749	33123211	M1811	21132422
M1502	32442312	M1564	31313123	M1626	21231234	M1688	24242421	M1750	31212313	M1812	34422424
M1503	43112243	M1565	33121124	M1627	43132232	M1689	31242432	M1751	13421343	M1813	21131332
M1504	21134223	M1566	44212113	M1628	21134243	M1690	23243232	M1752	32424434	M1814	12343113
M1505	34422433	M1567	43211342	M1629	33243321	M1691	13132424	M1753	34212423	M1815	42334212
M1506	11232242	M1568	13243323	M1630	24312311	M1692	34223313	M1754	23213423	M1816	44313343
M1507	32344212	M1569	32244231	M1631	42344242	M1693	44324233	M1755	13433232	M1817	44331321
M1508	31332431	M1570	34211312	M1632	42332231	M1694	32234331	M1756	23442132	M1818	23131344
M1509	31342323	M1571	11312243	M1633	34244332	M1695	32342331	M1757	32313431	M1819	32132223
M1510	42112424	M1572	12442422	M1634	31121332	M1696	44242423	M1758	13432332	M1820	24324334
M1511	11324321	M1573	23231244	M1635	33423344	M1697	23243331	M1759	11324244	M1821	44212422
M1512	22421231	M1574	33243132	M1636	32132343	M1698	43232134	M1760	13131233	M1822	42434242
M1513	24421242	M1575	23313113	M1637	13224212	M1699	23131124	M1761	43211321	M1823	23312432
M1514	34424422	M1576	42213431	M1638	34424233	M1700	42211231	M1762	11243231	M1824	33123243
M1515	44212121	M1577	12342243	M1639	21323424	M1701	34434232	M1763	24432132	M1825	42433243
M1516	13424421	M1578	31344312	M1640	34243131	M1702	34234311	M1764	31312124	M1826	21343332
M1517	24422134	M1579	23213311	M1641	23443123	M1703	11334212	M1765	42243442	M1827	32343124
M1518	24424342	M1580	44213344	M1642	34224334	M1704	12434322	M1766	34312431	M1828	34342212
M1519	21132113	M1581	32242234	M1643	34213224	M1705	42313134	M1767	33242331	M1829	33223421
M1520	11242442	M1582	43433242	M1644	12231313	M1706	43234423	M1768	23212124	M1830	32434342
M1521	32243322	M1583	43123313	M1645	12423423	M1707	42242443	M1769	13312424	M1831	43312431
M1522	23112331	M1584	32132433	M1646	13244322	M1708	32213221	M1770	44232343	M1832	23231334
M1523	13131224	M1585	12324243	M1647	32321124	M1709	33211244	M1771	21311334	M1833	12433234
M1524	31332123	M1586	11243223	M1648	23124311	M1710	31311232	M1772	42134313	M1834	43443421
M1525	44311323	M1587	32311213	M1649	13242432	M1711	42111242	M1773	31324233	M1835	22424421
M1526	31221331	M1588	43242131	M1650	12431343	M1712	23221133	M1774	23213212	M1836	32344311
M1527	32123131	M1589	13421312	M1651	43223124	M1713	31332211	M1775	34331224	M1837	42213242
M1528	13311322	M1590	42332224	M1652	44234242	M1714	42123332	M1776	42442213	M1838	12313124
M1529	24431331	M1591	11342343	M1653	44331123	M1715	32423321	M1777	42334432	M1839	33432312
M1530	12343121	M1592	31223424	M1654	42234223	M1716	42423424	M1778	31133131	M1840	33431232
M1531	31311313	M1593	21243423	M1655	34223344	M1717	12334324	M1779	24312212	M1841	34343422
M1532	33242224	M1594	22421344	M1656	34213134	M1718	11223121	M1780	13243422	M1842	23233422
M1533	12242343	M1595	42232331	M1657	42431231	M1719	23244312	M1781	43421331	M1843	43434224
M1534	24234213	M1596	13432242	M1658	42433121	M1720	23242323	M1782	32433223	M1844	31343322
M1535	42321113	M1597	23242113	M1659	22424233	M1721	23234232	M1783	12334431	M1845	32333424
M1536	43443134	M1598	31231231	M1660	21324212	M1722	12434224	M1784	33423231	M1846	22132442
M1537	12321242	M1599	22434442	M1661	42124234	M1723	33442432	M1785	34423324	M1847	32443424
M1538	34312332	M1600	22132231	M1662	13122313	M1724	34422321	M1786	22434231	M1848	11342231
M1539	24313232	M1601	31211244	M1663	11321342	M1725	21311342	M1787	11312423	M1849	34211342
M1540	23212231	M1602	23131321	M1664	44224243	M1726	22431244	M1788	31213443	M1850	13132231
M1541	23121313	M1603	44311332	M1665	21242321	M1727	13124334	M1789	31324242	M1851	31123231
M1542	12124424	M1604	23421244	M1666	31224311	M1728	33123324	M1790	22332131	M1852	11223331
M1543	23134233	M1605	23312324	M1667	42421211	M1729	13311232	M1791	43433422	M1853	23423443
M1544	42123242	M1606	22424443	M1668	43243123	M1730	22313131	M1792	42434422	M1854	32213131
M1545	33243442	M1607	33423212	M1669	42443113	M1731	34431223	M1793	12124442	M1855	22434321
M1546	12234243	M1608	23123123	M1670	21343431	M1732	33434423	M1794	31243323	M1856	32313234
M1547	22432211	M1609	22431334	M1671	31213321	M1733	34224442	M1795	12133231	M1857	32112133
M1548	34432342	M1610	13133131	M1672	23431121	M1734	13433134	M1796	23344311	M1858	43231322
M1549	22123442	M1611	33112231	M1673	24343123	M1735	33244221	M1797	21334324	M1859	12324342
M1550	33122311	M1612	13343232	M1674	43134312	M1736	12231242	M1798	13232132	M1860	12131243
M1551	24231324	M1613	34242433	M1675	43243423	M1737	33442334	M1799	31212322	M1861	24231342
M1552	44312331	M1614	43123331	M1676	13134423	M1738	12422433	M1800	44234233	M1862	21131243
M1553	21134342	M1615	13123231	M1677	43424422	M1739	42443324	M1801	12432221	M1863	32332242
M1554	42442211	M1616	24344332	M1678	12434421	M1740	43343242	M1802	31331344	M1864	23424344
M1555	34311242	M1617	21133421	M1679	33211322	M1741	44322433	M1803	42442243	M1865	21134321
M1556	21242132	M1618	24331234	M1680	31211224	M1742	24421121	M1804	34422442	M1866	33112124
M1557	32343442	M1619	12422424	M1681	34322313	M1743	42343342	M1805	43324234	M1867	44212431
M1558	33124224	M1620	21343121	M1682	23344212	M1744	21343242	M1806	44232123	M1868	24213324
M1559	24324424	M1621	44323324	M1683	34242124	M1745	11223113	M1807	11244342	M1869	13223432
M1560	12432342	M1622	34223132	M1684	24231131	M1746	31233123	M1808	23224211	M1870	32331123



Continued from page 118

1998 Chrysler M Codes

M0001-2618

M1871	22124312	M1933	24433131	M1995	21242124	M2057	21124424	M2119	42324244	M2181	23442231
M1872	43244332	M1934	22113134	M1996	33121312	M2058	12433113	M2120	12311334	M2182	21342212
M1873	13344223	M1935	22331223	M1997	32312343	M2059	33112344	M2121	23131312	M2183	33122423
M1874	42423221	M1936	24231123	M1998	13422342	M2060	42132332	M2122	34424242	M2184	24313224
M1875	13112243	M1937	12243342	M1999	13342242	M2061	22131322	M2123	24234343	M2185	43431124
M1876	42211334	M1938	42312113	M2000	23433442	M2062	33424334	M2124	32242211	M2186	32122442
M1877	43123224	M1939	23342232	M2001	31231312	M2063	32434221	M2125	24343342	M2187	33132121
M1878	42324213	M1940	24211213	M2002	12423334	M2064	12422343	M2126	32124432	M2188	24321131
M1879	42432312	M1941	21133231	M2003	42242231	M2065	24342344	M2127	42342131	M2189	43313344
M1880	33231121	M1942	42323313	M2004	13112234	M2066	22443442	M2128	33122343	M2190	33433244
M1881	22122331	M1943	42311243	M2005	12244332	M2067	12243311	M2129	24244342	M2191	22342324
M1882	13312321	M1944	33131311	M2006	42213422	M2068	43431223	M2130	34312323	M2192	13324242
M1883	12342131	M1945	24433221	M2007	42343311	M2069	43223231	M2131	34242312	M2193	23422332
M1884	43123134	M1946	44232213	M2008	31323113	M2070	43442113	M2132	11334221	M2194	43434331
M1885	43343324	M1947	33122123	M2009	44213133	M2071	12442242	M2133	32331342	M2195	23224233
M1886	23344243	M1948	42324312	M2010	24243223	M2072	32312324	M2134	42321242	M2196	34342334
M1887	13434321	M1949	43311224	M2011	13443132	M2073	23324232	M2135	23342224	M2197	44322442
M1888	21342131	M1950	34234243	M2012	23443317	M2074	23234223	M2136	13124321	M2198	24432321
M1889	24332331	M1951	22431212	M2013	44211211	M2075	34322434	M2137	23322342	M2199	24342321
M1890	53223423	M1952	44221323	M2014	42323434	M2076	43132322	M2138	42331331	M2200	24234433
M1891	12213134	M1953	12231331	M2015	32433124	M2077	13121234	M2139	23121322	M2201	42432424
M1892	12332132	M1954	43432423	M2016	43421322	M2078	33443113	M2140	21332432	M2202	31213124
M1893	22442443	M1955	11223242	M2017	32431113	M2079	21343234	M2141	21232442	M2203	24243433
M1894	33231342	M1956	11242134	M2018	43134442	M2080	44212332	M2142	13433224	M2204	23432443
M1895	23133113	M1957	34313322	M2019	12443134	M2081	24422421	M2143	12131234	M2205	23132244
M1896	33132342	M1958	13234224	M2020	42134331	M2082	12312331	M2144	43312211	M2206	32434424
M1897	21243311	M1959	33134421	M2021	31223131	M2083	23121233	M2145	31332121	M2207	34242134
M1898	42432321	M1960	24224344	M2022	13312433	M2084	23243322	M2146	24211244	M2208	42442423
M1899	13134324	M1961	34433121	M2023	12343422	M2085	23213244	M2147	12342342	M2209	12332231
M1900	23122433	M1962	42343123	M2024	13443312	M2086	42424423	M2148	21213134	M2210	32324313
M1901	23423322	M1963	34243432	M2025	21122311	M2087	11232313	M2149	42344211	M2211	21324221
M1902	42133211	M1964	11212421	M2026	42233421	M2088	13342234	M2150	42234312	M2212	34313443
M1903	42211213	M1965	24323223	M2027	24231212	M2089	23133212	M2151	21342123	M2213	44323243
M1904	23442312	M1966	24212121	M2028	31322343	M2090	12423342	M2152	43243212	M2214	33113244
M1905	23122124	M1967	42323223	M2029	44244313	M2091	34322331	M2153	13324332	M2215	34343324
M1906	12123134	M1968	12121342	M2030	13121323	M2092	44232424	M2154	32423133	M2216	23134224
M1907	42243433	M1969	31244313	M2031	24334311	M2093	21312313	M2155	23112242	M2217	32312123
M1908	34322421	M1970	32242431	M2032	33211231	M2094	12432123	M2156	21311243	M2218	34334242
M1909	12343324	M1971	43132331	M2033	44311344	M2095	34334224	M2157	31134221	M2219	33422331
M1910	44234332	M1972	44231223	M2034	23234421	M2096	21312331	M2158	31132442	M2220	21123422
M1911	13213344	M1973	34324221	M2035	42232243	M2097	31242423	M2159	13242423	M2221	11212442
M1912	21244242	M1974	13343421	M2036	31244224	M2098	13442224	M2160	33224331	M2222	12243423
M1913	34211243	M1975	24421113	M2037	44234431	M2099	22442323	M2161	34311221	M2223	33112424
M1914	13123133	M1976	24334234	M2038	33213211	M2100	22431311	M2162	23313342	M2224	42242134
M1915	44242432	M1977	23112434	M2039	24311312	M2101	42442334	M2163	42234434	M2225	31323422
M1916	21242312	M1978	43422312	M2040	33244243	M2102	42343121	M2164	34244211	M2226	33213342
M1917	12234342	M1979	32134332	M2041	23134211	M2103	43132313	M2165	11322313	M2227	42334221
M1918	44312133	M1980	11243312	M2042	31224212	M2104	34334422	M2166	32132424	M2228	43244324
M1919	32424442	M1981	24234334	M2043	32432232	M2105	32113424	M2167	42443431	M2229	32432134
M1920	44243332	M1982	24233434	M2044	43323424	M2106	23224323	M2168	31243422	M2230	44242334
M1921	32313342	M1983	32134234	M2045	42231244	M2107	32213123	M2169	44321132	M2231	42244334
M1922	12242124	M1984	12234221	M2046	11232331	M2108	24242233	M2170	43123322	M2232	32343312
M1923	24234244	M1985	43443224	M2047	43423121	M2109	42431322	M2171	21133132	M2233	43244234
M1924	22442421	M1986	23434424	M2048	34331134	M2110	13213133	M2172	42244311	M2234	12242132
M1925	44334232	M1987	11232421	M2049	44322424	M2111	23423232	M2173	34243311	M2235	23442344
M1926	24243124	M1988	24331211	M2050	21321113	M2112	12243432	M2174	22421132	M2236	24332322
M1927	44343224	M1989	44242342	M2051	42233132	M2113	34321323	M2175	33443423	M2237	22431131
M1928	32231133	M1990	44233121	M2052	44331213	M2114	24343212	M2176	43243334	M2238	13421132
M1929	34311311	M1991	23343124	M2053	43442242	M2115	33422322	M2177	24243321	M2239	24423424
M1930	24342424	M1992	33121344	M2054	43433431	M2116	32432443	M2178	12132211	M2240	44342422
M1931	34231332	M1993	31231321	M2055	31233212	M2117	23212433	M2179	12344224	M2241	43132421
M1932	21243123	M1994	34224213	M2056	23421342	M2118	13234332	M2180	12334211	M2242	11343221



Continued from page 120

1998 Chrysler M Codes M0001-2618

M2243	23132123	M2306	13243242	M2369	43311242	M2432	43213421	M2495	34242321	M2558	24334243
M2244	23342443	M2307	42233231	M2370	43432432	M2433	31233121	M2496	22323431	M2559	13242221
M2245	21331321	M2308	43422442	M2371	12443232	M2434	24424432	M2497	33112132	M2560	44231124
M2246	13313244	M2309	33243231	M2372	32443123	M2435	42213234	M2498	11224232	M2561	23243421
M2247	13213124	M2310	23212424	M2373	43422321	M2436	34323123	M2499	24221132	M2562	24334221
M2248	13113134	M2311	33421332	M2374	23234331	M2437	32421212	M2500	42134224	M2563	22312124
M2249	42311342	M2312	13211323	M2375	24332232	M2438	24233133	M2501	42334342	M2564	11324312
M2250	12242231	M2313	22331124	M2376	32212124	M2439	43433113	M2502	22313311	M2565	21324311
M2251	21121342	M2314	13132421	M2377	32242243	M2440	31313311	M2503	31323431	M2566	32211331
M2252	21342342	M2315	42121211	M2378	34232232	M2441	42342312	M2504	43431343	M2567	31342332
M2253	43213322	M2316	43343431	M2379	44344312	M2442	13244331	M2505	32233422	M2568	43432243
M2254	32334231	M2317	23442223	M2380	24244221	M2443	34243423	M2506	33432124	M2569	44221232
M2255	12243131	M2318	13431342	M2381	42424211	M2444	32313422	M2507	31312321	M2570	12423211
M2256	31242342	M2319	21242231	M2382	43313231	M2445	42323344	M2508	33422134	M2571	11322311
M2257	24234442	M2320	22443321	M2383	22423331	M2446	33213422	M2509	22311313	M2572	24221321
M2258	13323211	M2321	32344342	M2384	32433231	M2447	31132224	M2510	31332422	M2573	31234332
M2259	12421322	M2322	13443231	M2385	21334422	M2448	21224321	M2511	42121133	M2574	12434331
M2260	12342221	M2323	42421232	M2386	21321331	M2449	21213331	M2512	11342312	M2575	21334332
M2261	42422331	M2324	44331343	M2387	42323443	M2450	33434234	M2513	43442422	M2576	44243431
M2262	32334311	M2325	24243312	M2388	44343331	M2451	11321123	M2514	34243212	M2577	44322312
M2263	11242232	M2326	32442124	M2389	31213132	M2452	33423132	M2515	23324421	M2578	12424422
M2264	44313424	M2327	32121313	M2390	31331212	M2453	12432212	M2516	43423432	M2579	42244342
M2265	22331344	M2328	43423243	M2391	21123133	M2454	42113432	M2517	44233432	M2580	31321312
M2266	1131332	M2329	34421322	M2392	33123113	M2455	34332442	M2518	44231132	M2581	13134212
M2267	22433422	M2330	42421323	M2393	24323124	M2456	34323442	M2519	24433123	M2582	43232224
M2268	21342244	M2331	24424423	M2394	22424323	M2457	34244242	M2520	32131321	M2583	21132331
M2269	23211331	M2332	21344224	M2395	11331313	M2458	43423311	M2521	34423243	M2584	32121132
M2270	31343421	M2333	32134422	M2396	23134323	M2459	24332443	M2522	42343244	M2585	42233134
M2271	31344321	M2334	24334432	M2397	34434313	M2460	24331242	M2523	32443212	M2586	32124212
M2272	23213123	M2335	33113432	M2398	43422124	M2461	34231242	M2524	24323231	M2587	42321121
M2273	12332432	M2336	24431232	M2399	23113321	M2462	31132134	M2525	33423124	M2588	44331312
M2274	12321331	M2337	21242343	M2400	13344312	M2463	33421211	M2526	24322431	M2589	13311313
M2275	13213223	M2338	43122324	M2401	34344313	M2464	11234231	M2527	24432223	M2590	32321131
M2276	11234244	M2339	43312422	M2402	42242132	M2465	12442234	M2528	31313424	M2591	43243342
M2277	23424434	M2340	32244321	M2403	11332424	M2466	43113332	M2529	13422311	M2592	23321312
M2278	23422113	M2341	33123431	M2404	34332231	M2467	13231232	M2530	33432434	M2593	34231234
M2279	42433213	M2342	34213323	M2405	13424322	M2468	11224322	M2531	34433113	M2594	22421124
M2280	22443124	M2343	43322132	M2406	23123343	M2469	23433132	M2532	31232131	M2595	31232124
M2281	43242223	M2344	22443231	M2407	42344324	M2470	13244232	M2533	13443321	M2596	34242223
M2282	21234212	M2345	34233424	M2408	32421244	M2471	24243231	M2534	12323132	M2597	12342334
M2283	24323421	M2346	43124443	M2409	23232342	M2472	42431224	M2535	22332342	M2598	13224221
M2284	31343232	M2347	24432124	M2410	11312342	M2473	43342244	M2536	24211231	M2599	13343322
M2285	31212232	M2348	12431124	M2411	24242134	M2474	21122423	M2537	12232424	M2600	32434311
M2286	11334342	M2349	44313321	M2412	44233423	M2475	11342132	M2538	32231124	M2601	34422312
M2287	11244211	M2350	22311242	M2413	23121224	M2476	12423123	M2539	22432324	M2602	31213312
M2288	43344232	M2351	33224223	M2414	44313244	M2477	12331224	M2540	24424243	M2603	34343113
M2289	42242421	M2352	34232224	M2415	34224433	M2478	32243331	M2541	13312312	M2604	34324342
M2290	23132334	M2353	34343431	M2416	33124332	M2479	43311212	M2542	43323244	M2605	43342342
M2291	23434311	M2354	13134342	M2417	31232433	M2480	43232443	M2543	43231331	M2606	44223424
M2292	24433423	M2355	21231331	M2418	12213331	M2481	42212342	M2544	34344331	M2607	12442121
M2293	33234312	M2356	34312422	M2419	42243124	M2482	43233131	M2545	23133243	M2608	44232221
M2294	12442324	M2357	13123124	M2420	23113433	M2483	21321313	M2546	34424332	M2609	42324334
M2295	32323134	M2358	42313331	M2421	32434212	M2484	32424344	M2547	42432343	M2610	21331224
M2296	24423343	M2359	24343311	M2422	21321242	M2485	13224342	M2548	23124234	M2611	21312242
M2297	13231344	M2360	32131312	M2423	33211334	M2486	33122334	M2549	33434211	M2612	42112442
M2298	23343132	M2361	42332134	M2424	11223313	M2487	13132442	M2550	43324423	M2613	34243123
M2299	42311324	M2362	23432331	M2425	13313123	M2488	21133442	M2551	13133123	M2614	24344242
M2300	11231123	M2363	42233224	M2426	43122431	M2489	42342442	M2552	34342131	M2615	34224424
M2301	34313434	M2364	42424324	M2427	12431321	M2490	22433134	M2553	43431131	M2616	12422132
M2302	24343423	M2365	44234323	M2428	21123331	M2491	34423342	M2554	23213432	M2617	43322331
M2303	43423342	M2366	44323311	M2429	22432113	M2492	24313134	M2555	22313123	M2618	44324431
M2304	13442443	M2367	34323244	M2430	23134242	M2493	24423433	M2556	33442212		
M2305	23311213	M2368	23342322	M2431	21324423	M2494	21243131	M2557	24334212		

TNL

Odds & Ends

by Sal Dulcamaro

During the course of the year, I often come across interesting bits of information that are too short to make up an entire article, yet still warrant some attention. Over time I would accumulate unrelated items of information and then wonder what to do with it. I have decided to organize the information I have assembled and put it all into a single article that I'll title "Odds and Ends." I plan to write an "Odds and Ends" article once or twice a year. I'll use that forum to tie up loose ends or follow up previously written articles, and to write about new things that don't quite justify a whole article for a particular topic.

Sturdier Cam Lock Installations

Back in September, I wrote an article about the specialty locks from Olympus Lock. They package an interesting installation plate with their small pin tumbler cam locks. *Photograph 1*, shows that special plate, called a Stabilizer Plate, fitted around a common disc tumbler cam lock. Further to the right are two examples of gripper type reinforcing plates that are packaged with most standard type disc tumbler cam locks. Teeth or protrusions are normally supposed to press into or around a wood mounting hole to keep an installed cam lock from working loose and opening without a key.

Over the years whenever I had installed cam locks with those types of plates, the locks would eventually work loose. Ultimately, the cabinets or drawers that had contained the cam locks wouldn't remain locked. The teeth, that protrude from the plate, just chews up the wood surface until there is no way to re-secure the lock in the drawer or door.

Since becoming aware of the existence of the Stabilizer Plates, I have not installed any cam locks in wooden drawers or doors without them. They provide a much more secure installation than the standard gripper type reinforcing plates. Although the Stabilizer Plates are

normally packaged with Olympus' own pin tumbler cam locks, you can purchase them separately. They work for installing any brand of cam locks that use the standard 3/4 inch size mounting hole.

The list price for a Cam Lock Stabilizer Plate from Olympus is \$.80, and the part number is DCNP-500-ARP. They are not bulk packed, so you can order them in odd numbered quantities. If your local supplier doesn't carry them in stock, you can contact Olympus Lock at (800) 525-0954. Total minimum order will be about \$25, but the total order can include other items beside the Stabilizer Plates.

That special plate, called a Stabilizer Plate, fitted around a common disc tumbler cam lock.



January 1998 • 123

Lockmasters
has a
44 year
history of
training
security
professionals.

[Click here for more information](#)

Missing Face Plate Screws

When I go out to rekey a lock cylinder in a mortise lockset, it is not uncommon to find one or more of the face plate screws missing or substituted by wood screws, drywall screws or who knows what. I don't always have the correct screws on hand for the lock face plate so I have found a plentiful supply of screws (with matching threads) that are an excellent substitute.

At the bottom of *Photograph 2*, is a standard type screw that is packaged with a variety of brands of knob or deadbolt locks. The shaft of the screw closest to the screw's head looks like a machine screw, while the tip end looks like a wood screw. At the top is a modified version of the same type of screw, with the tip end cut off, leaving nothing but a machine screw. The threads match up perfectly and they are an ideal replacement for missing face plate screws for mortise locksets, both for Adams Rite and full size mortise locksets.

Turning Tools and Tension Headaches

When I started in this business more than twenty years ago, the tool used to rotate the lock plug after picking was always called a "tension wrench." Somewhere along the way between now and then, somebody decided that a more accurate and appropriate term for such a tool should be a "turning tool." Regardless of what you call it, you will need a tool of some kind to accomplish the task of rotating the plug.

When I'm picking a lock, the tool I use to apply turning pressure does a couple of things during the actual picking process. I first insert that tool

before I insert any picking tools. When I start to apply turning pressure, none of the tumblers are in the proper position to unlock. As I try to rotate the plug, it will move very slightly until one or more of the tumblers hit the side walls of their respective chambers. That range of motion is almost always very small, depending on the built in tolerances of the manufacturer's specifications.

The picking tool is inserted and I then proceed to lift up on the tumblers in to detect which ones are binding. As individual tumblers are lifted to the proper height, the plug very gradually rotates further and further, until the last tumbler is picked and the plug rotates very dramatically. Fairly light turning pressure usually gives the greatest level of success.

When I first learned to pick locks many years ago, the turning tools I used were basically L-shaped pieces of spring steel. I still usually use the same type of turning tools. I was taught to place the turning tool in the bottom of the keyway. When picking some locks that require the tumblers to be positioned lower in the keyway, I have found that the turning tool interferes with my ability to manipulate those tumblers with my picks. Some years ago, I learned some improved picking techniques from the very knowledgeable Gerry Finch.

One technique was to position the turning tool at the top of the keyway instead of the bottom. Placing the turning tool at the top gives your picks a full range of motion to position the tumblers as high or low in the keyway as is needed. The only problem with placing a standard turning tool at the top of the keyway is that the part of the turning tool that enters the keyway is too long to go in without interfering with the tumbler in the first chamber position. Now Gerry Finch designed a line of turning tools for LAB that have shorter tips, and they fit quite well into the top of a standard keyway. The problem is that most suppliers don't stock LAB pick sets.

Since HPC is the brand stocked by most locksmith supply companies, I have managed to modify the double ended HPC TR25 turning tools to suit my purpose. *Photograph 3*, shows two examples of the TR25 turning tools with one side having the unmodified long tip and the other side ground down shorter to be used in the top of the keyway. With this setup, I can use one side for picking with the turning tool at the



A standard type screw that is packaged with a variety of brands of knob or deadbolt locks.

Two examples of the TR25 turning tools with one side having the unmodified long tip and the other side ground down shorter to be used in the top of the keyway.



An adjustable and non-adjustable version of the turning tools by John Falle.

bottom of the keyway and by turning it around I can use the other side at the top of the keyway.

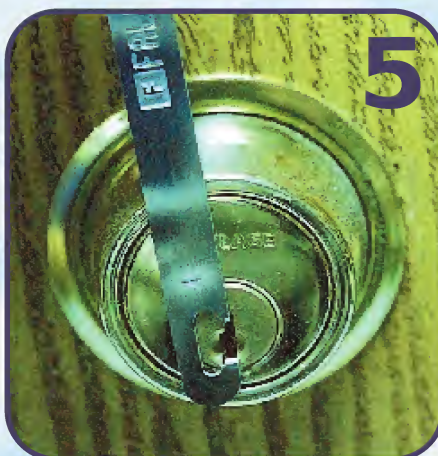
Even though a modified standard turning tool positioned at the top of the keyway provides greater range of motion for more effective picking, the turning tool will still obstruct the top of the keyway and limit visibility of the tumblers. Even though it is often more effective than the standard turning tools, I've seen an even better designed turning tool. The absolutely best designed turning tools that I've seen are made by John Falle. An adjustable and non-adjustable version of his turning tools are shown in *Photograph 4*.

This tool is designed to grip the keyway at both the top and bottom, and it causes almost no obstruction of the keyway at all. *Photograph 5*, shows how it fits into a lock's keyway giving both full visibility and range of motion. These turning tools come with one of the finest pick sets that I've ever seen.

The full pick set is not inexpensive, but you can buy the turning tools separately and they are very reasonably priced. They are available from Mark Bates Associates, along with all kinds of other specialty tools and safe lock products. You can reach them at their toll free number, 1-888-MBA-5495.

Auto Transponders

I recently got my hands on the new transponder lock and keys for the



The Falle tool is designed to grip the keyway at both the top and bottom, and it causes almost no obstruction of the keyway at all.

1998 Cadillac Seville. From what I can tell, it appears to be of the same design that was introduced on the 1997 Buick Park Avenue. It is identified as "PASS-Key III" in *Photograph 6*. I believe it is the Huf 10-cut transponder design. The code number on the key tag is 0087, so I would guess it uses the same 0001-1988 code series as the Park Avenue.

Photograph 7, shows the primary key (with the Cadillac logo) that will operate all locks on the car, and the valet key that will only enter the door and ignition locks. I was told that there will be no passenger door lock on that particular Cadillac model. Notice the "PK3" marking on the

Major
MANUFACTURING, INC.

Installation
Tools

The
Professionals
Choice

Major
MANUFACTURING, INC.

[Click here for more information](#)



6
PASS-Key III™ is the Huf 10-cut transponder design.

The other side of the valet key reveals that it is missing the middle groove found on both sides of the primary key.



7
The primary key that will operate all locks on the car, and the valet key that will only enter the door and ignition locks.

necks of the keys, which obviously means "PASS-Key III". In Photograph 8, the other side of the valet key reveals that it is missing the middle groove found on both sides of the primary key. The missing groove prevents the valet key from fully entering the glove and deck locks.

The operation of the driver's door lock activates and deactivates the alarm as the door is locked and unlocked. I can't verify it, but I was told that since there is no passenger side door lock, the operation of the hatch or deck lock was to be the backup method to mechanically switch the alarm on or off, in case the driver side door lock malfunctioned. I presume the car's key fob remote control also sets the alarm as it locks and unlocks the car.

Photograph 9, shows the valet key fully entering the ignition keyway. Although it operates the ignition and door, Photograph 10, shows that the valet key only goes into the deck lock part way and stops. The same should apply to a glove box lock.

Chrysler Introduces Transponder Based Ignition Locks

Chrysler is coming out with its own version of electronically enhanced ignition security on selected 1998 model cars. Like Ford and some GM, they will also use transponder keys. Called the Sentry Key Immobilizer System, it will be on the 1998 Chrysler Sebring Convertible and Jeep Wrangler, with Chrysler LHS and Eagle Vision to follow.

I came across a Chrysler service technicians' guide at a recent meeting of my local locksmith association. Apparently someone in our association had acquired a number of copies of a Chrysler in-house publication intended for their own service technicians. The theme of this issue of

medeco
HIGH SECURITY LOCKS

**The market leader
in locking systems
for security, safety,
and control.**

[Click here for more information](#)

the publication was Chrysler's new transponder system. I'm not sure how much of the information in the guide was previously available to our trade, but I'll try to paraphrase some of its contents.

The Chrysler transponder key has the transponder concealed within the gray molded plastic of its oval shaped head. The antenna fits like a ring over the ignition lock and is part of the Sentry Key Immobilizer Module or SKIM, which is located on the steering column. The functions of the SKIM include:

1. It communicates with the transponder in the key during the programming process or when it verifies valid keys.
2. It stores Secret Key data, which will identify components as part of the vehicle's system.
3. It communicates with the Power Train Module or PCM to authorize vehicle starting and running.
4. It monitors the system for any malfunctions, and when needed triggers events to turn on a warning lamp.

It appears that the main function of the PCM is to prevent the car from continuing to run if the SKIM doesn't send a valid key message. The booklet indicates that there are some variations in the individual components of the total system depending on the vehicle. In some cases the PCM also acts to shut down the fuel injectors and starter relay after a number of unsuccessful attempts to start the car. The PCM also stores vehicle identification information and backs up information referred to as Secret Key data if the SKIM is replaced.

There is also something called VTSS or the Vehicle Theft Security System, which is part of only some Chrysler transponder based security systems. The warning lamps seem to be different between those that use VTSS and those that don't.

I'm not sure if I'm reading this service guide correctly, but it seems that Chrysler has a transponder key based system that is substantially different than used by Ford. It has been my impression that the Ford system is programmed to recognize the identity of specific transponder keys, and to either start if a recognized key is used or not start if the key is not recognized.

The Chrysler version (unless the service guide is mistaken or I'm just totally misreading it) appears to involve not only programming the



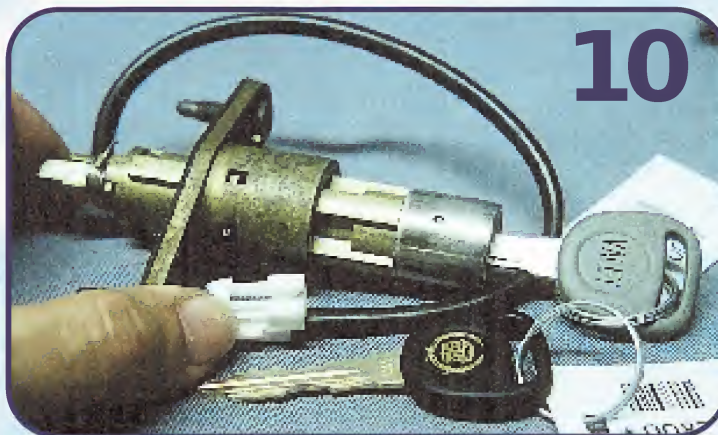
The valet key fully entering the ignition keyway. Although it operates the ignition and door.

NATIONAL AUTO LOCK SERVICE, INC.

National Auto Lock Service, Inc. offers a wide range of equipment and services for the Automotive Locksmith. From tools and hard to find key blanks to transponder programming, we can take the mystery out of car service. We accept credit card orders, and can ship COD. Contact us for the latest in automotive technology.

www.laserkey.com

The valet key only goes into the deck lock part way and stops. The same should apply to a glove box lock.



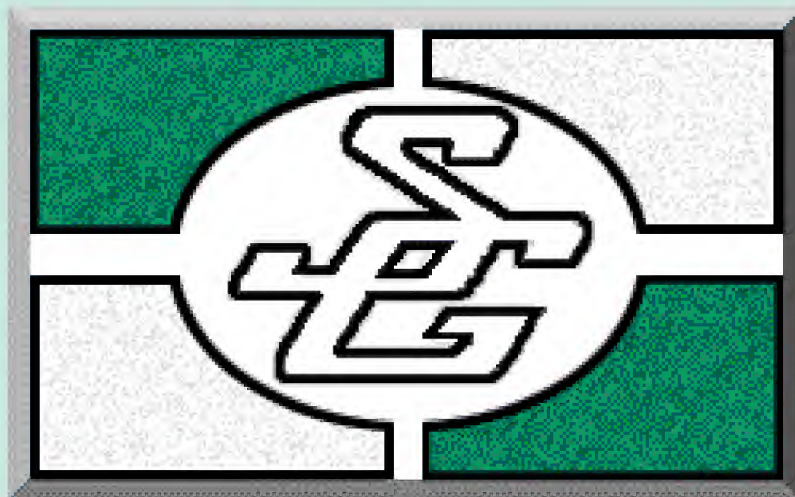
system to recognize keys, but actually programming information into the keys themselves. Unless this service guide is wrong or there are dramatic changes in Chrysler's system from what is indicated, it looks like a potential nightmare to fit an operating key when all keys have been lost.

The Ford transponder system can be reprogrammed if all keys are lost by a lengthy process (which takes a little more than 45 minutes) which results in all earlier programmed keys being lost from memory. According to the Chrysler service guide, a key programmed for one car cannot be

programmed to work with another car. Also, if no currently working keys are available, a new operating key cannot be programmed if the car's own identity code is not known. The service guide also suggests that if the identity codes of the SKIM or PCM are not retained, then the car will not start at all with new replacement modules. I can't see where it tells how many, but a certain number of unsuccessful starting attempts will cause various fuel and ignition components to shut off. It doesn't say how long the systems stay shut off or what overrides them.

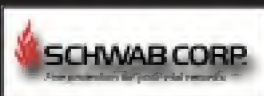
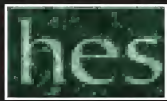
Programming and troubleshooting seems to be accomplished with an electronic device called the DRB III. Programming the system to accept a new key involves inputting a PIN with the DRB III. If you don't input the data properly within three attempts, you will be locked out of access for one hour. Not only that, you must leave the ignition turned to "Run" for one hour, before you can try again. The service guide suggests that you may need to leave a battery charger connected to the car so it doesn't run down the battery. You can't see it, but my head is spinning right now. Maybe you're sharing my experience. This can't possibly be that complicated, or can it?

The booklet indicates a way to program keys without the DRB III. Unlike Ford that only requires one already programmed key to be used, Chrysler requires two different already programmed keys to be used for programming additional keys. Personally, I don't find the information particularly encouraging. I do hope, however, that there is some unpublished locksmith-friendly decoding procedures available somewhere. **TNL**



**Make Sargent & Greenleaf's
Comptronic locks your choice for
electronic safe locking solutions.**

[Click here for more information](#)



TEST DRIVE!

PRODUCT:

The NanoLox-B is a battery operated electronic lock that is built around a Schlage D series Rhodes lever lockset. There is a four button keypad as well as a key override in the lever. The original conception of this lock was a self generating version of the same design. There was a trigger just above the lever that needed to be pulled a couple of times to produce electricity to the circuit allowing input from the keypad. From that original concept, three AA batteries have since replaced the built in generator, eliminating the need to fire-up the lock before inputting your code into the keypad.

COMBINATIONS:

This lock has a staggering number of combination possibilities. There are over a million combination possibilities. Now you may be wondering how you can possibly get a million possible combinations from a four digit keypad. Well, for one, codes can be up to seven digits long, and up to three keypad buttons may be used simultaneously in the code. For example: 12-123-4. That would be 1 & 2 together, then 1,2 & 3 together, and then 4 to access. With this capability, you should never run out of possible access codes.

As for the number of users the lock will actually hold depends on which model you specify. The NanoLox-B 125 will hold 125 users. The NanoLox-B 250 will hold 250 users.

The NanoLox-B also features a lockout mode. After three wrong attempts, the lock will shut down. Should this occur, a correct combination would need to be entered twice, before the lock will activate. If not, the lock remains in the lockout mode.

NanoLox-B

by Nanotechnology

PROGRAMMING:

Programming this lock is much like building a master key system. There are user codes, Submaster codes and Grand Master codes. User codes can be from three to seven digits long. The Submaster code is eight digits in length. The Grand Master code is permanently embedded in the lock and is the only one that can not be changed. Every lock has a pre-programmed Grand Master code, Submaster code and 125 or 253 user codes. The Grand Master code is the only code that cannot be changed and is different for each lock. The Grand Master code is used only to change the Submaster code. The Submaster code is used for all other programming.

There are two LEDs on the top of the unit (one green one red) which indicate whether programming or code input is correct. Green means good, Red means not good.

INSTALLATION:

Since the NanoLox-B is built around a Schlage D series lockset, the lock will install in a standard 2-1/8" door prep hole. The only extra drilling that will be needed is to drill the top and bottom post mounting holes which prevent the lock from twisting, due to the added force that can be applied to the levers. Other than that, lock installation is pretty straight forward.

Future versions of the NanoLox-B will include an audit trail capability. This inclusion is obviously for commercial purposes, which is demanding more audit capability for internal control.



CONSTRUCTION:

Construction of this lock seems fairly good. The only drawback that I can see is that the lock must be removed to change the batteries. This design should be re-thought. If you should have a number of locks on a facility that needed battery changing, this could pose a problem. Front access would be preferred, although batteries should last a while.

CONCLUSION:

The NanoLox-B is another player on the electronic access category. It is a rather nice looking product built on a solid Schlage chassis that is easy to operate.

As the electronics invasion continues, products such as the NanoLox-B will become more commonplace with time. As time goes on, user appeal for just such a keyless lock will also increase.

Retail price for the NanoLox-B is \$600.00.

For more information on Nanotechnology products call: (408) 973-8280.

IN SUMMARY:

DESCRIPTION: The NanoLox-B is a battery operated electronic lock that is built around a Schlage D series Rhodes lever lockset

PRICE: \$600.00

TEST DRIVE RESULTS: A rather nice looking product built on a solid Schlage chassis that is easy to operate.